

JUNE 22, 1959

# PURCHASING

The Methods and News Magazine for Industrial Buyers



*Westinghouse president Mark Cesap warned P.A.'s they would be faced with growing responsibilities*



*Convention directory board made it easy to renew old acquaintances*

## N.A.P.A. CONVENTION REPORT



*As always, every general convention session was heavily attended. Particularly popular were the discussions of materials management, value analysis, and business outlook.*

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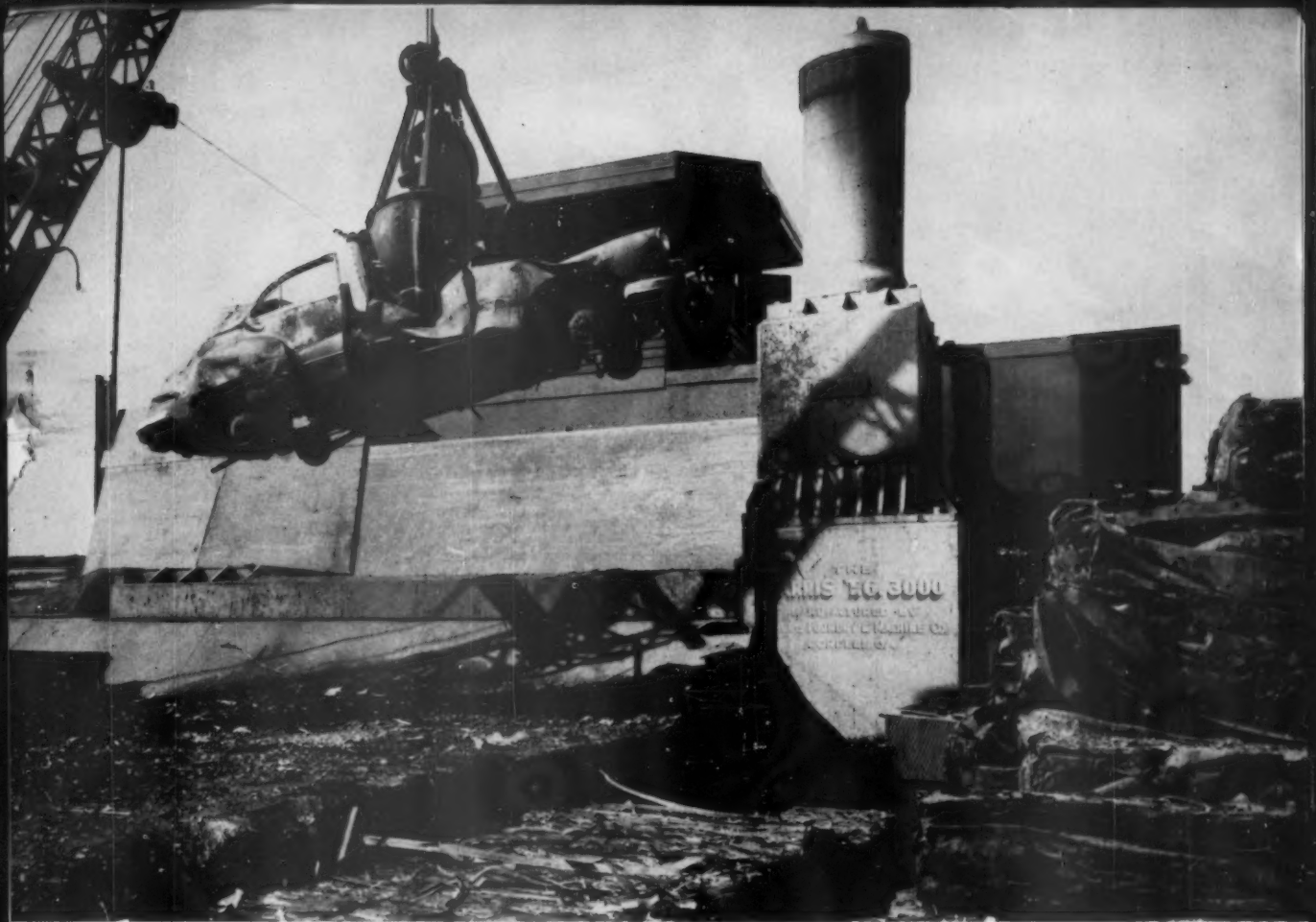
For more information, write Shell Oil Company, 50 West 50th Street, New York 20, New York, or 100 Bush Street, San Francisco 6, California. In Canada: Shell Oil Company of Canada, Limited, 505 University Avenue, Toronto 2, Ontario.

## **SHELL MACOMA OIL**

*the extreme pressure industrial gear lubricant*





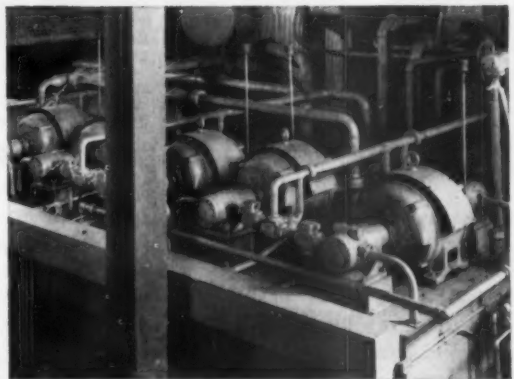


## Smashing $\frac{3}{4}$ ton autos into 5 ft. bales

In a scrap salvage yard in Chicago, this huge press smashes automobiles into five-foot bales. Here's how it works. Stripped autos are shoved into a 20-foot press box. At the flip of a switch three giant plungers jam down with a force of over 1000 tons. Result: A compact bale, five feet long and two feet deep. About 30 cars an hour are run through this giant baling press.

Powering this mammoth machine requires sturdy motors. They have to deliver an instantaneous surge of power to drive home the huge plungers. Five Century Electric 100 hp motors do the job. Result: Plenty of dependable power when and where it's needed.

Century Electric application engineers have helped develop thousands of motor drive systems like this. And they can design the right drive system for your equipment because Century Electric designs, manufactures and applies motors and nothing but motors . . . your assurance of getting more than just a motor.

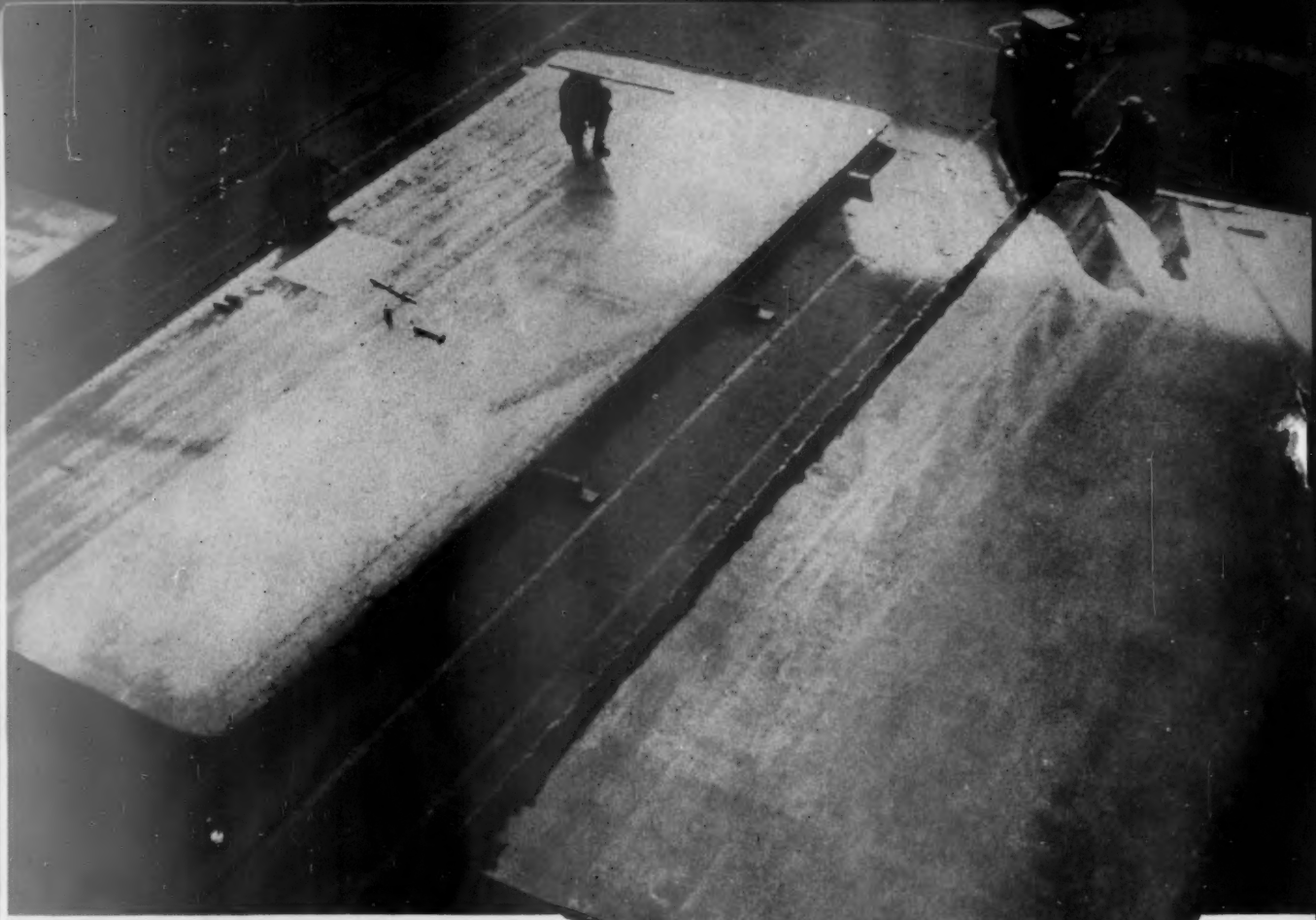


Five 100 hp Century Electric motors provide dependable muscle power for the huge press.

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These huge plates, of Type 304 stainless steel, were made to Specification A-240 Grade S (ASTM A240-T). Each plate weighed over 49,000 pounds; one measured 461" x 179" x 2"; the other 451" x 184" x 2". Destined

for a nuclear application, these plates were flame-cut and abrasive-cut to make two half-circles. The entire order totaled nearly 100,000 pounds.

Cooperation made this "colossus" a success—cooperation under the knowing eyes of Carlson specialists. This same team is ready to work on your order. We invite you to write, wire or phone for further information.

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# Bearing Buying Guide

NO. 4



A REPORT ON FAFNIR BEARING DEVELOPMENTS AND DISTRIBUTION ACTIVITIES

## NEW AW-AK AIRCRAFT CONTROL BEARINGS MEET HIGH-TEMPERATURE, LOW TORQUE REQUIREMENTS



Developed specifically for control systems of high speed aircraft Fafnir's new AW-AK 440C stainless steel ball bearings are heat stabilized and equipped with Teflon seals for operation at temperatures in the 550° range. Retainers insure low torque operation.

The new bearings are particularly suitable for use forward of the power-boost system where application calls for precise, sensitive, low torque bearing response. Bearing widths are held to close tolerances for ready mounting in standard brackets.

A new bulletin describing the AW-AK series and listing dimensions and load ratings is now available. Write The Fafnir Bearing Company, New Britain, Connecticut.

## SUPER-QUIET BEARINGS IDEAL WHERE SILENT SERVICE IS DESIRED

Originally developed for use in home heating and cooling equipment, Fafnir Super-Quiet Ball Bearings and Ball Bearing Units also provide ideal answers for applications where unusually silent performance is desirable.

In office machines and similar equipment, for example, the specially-polished balls and races in these Fafnir bearings help cut objectionable noise.

The bearings are also available in special, current-conducting rubber rings, cartridges, or cushioned pillow blocks. Write for bulletin.

Fafnir Super-Quiet Ball Bearing (third from left) and current-conducting rubber-cushioned RCSM and RCR Cartridges and RPB Pillow Block.



# FAFNIR

## BALL BEARINGS

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## FAFNIR BEARING ENGINEERING SERVICE COVERS INDUSTRY-WIDE FRONT



Fafnir bearing engineers at work on customer problem. Engineering divisions handle requirements from all industry.

Behind Fafnir's industry-wide diversity of line is a background of bearing engineering experience covering applications ranging from precision instruments to mammoth road-building equipment.

To meet needs on such a broad front, Fafnir engineering service is organized by divisions, each serving specific areas of industry.

Engineers in these divisions offer specialized knowledge of product requirements within their industry group. Textile machinery manufacturers, for example, can draw on the services of specialists in textile applications. Other divisions serve the aircraft, farm equipment, machine tool, air conditioning and the many other industries represented by Fafnir's diversified list of customers.

This combination of specialized know-how and all-industry diversity pays off time and again for manufacturers up against bearing problems. Ball bearing users can count not only on a seasoned approach to their particular requirements, but also benefit by Fafnir's experience in other, often wholly unrelated, fields.

Fafnir aircraft type ball bearings, for example, recently solved a bearing problem for a manufacturer of power tools.



Metallurgist in Fafnir laboratory formulates heat-treating specifications in controlled atmosphere furnace.

Another aircraft bearing is used by a manufacturer of automatic pin-spotting equipment.

Moreover, where special bearings may be needed, Fafnir research and development is well-qualified in man-power, facilities, and by experience to cope with the most exacting bearing requirements.

Comprehensive, all-industry bearing engineering service is one of many important customer benefits of Fafnir's nearly 50-year diversification of line and markets. Worth bearing in mind when you have bearing problems!

## RADIOISOTOPES USED IN FAFNIR TESTING LABORATORY

Among the more recent evidences of Fafnir's leadership in bearing research and development is the establishment of a bearing testing program utilizing radioactive isotopes.

Set up to study wear in bearing components, the program took several months to put into operation. Company engineers worked with nuclear radiation consultants in establishing procedures and safeguards in compliance with AEC regulations. Test lab personnel were specially trained in the proper handling of radioisotopes and the delicate instruments for monitoring and controlling testing.

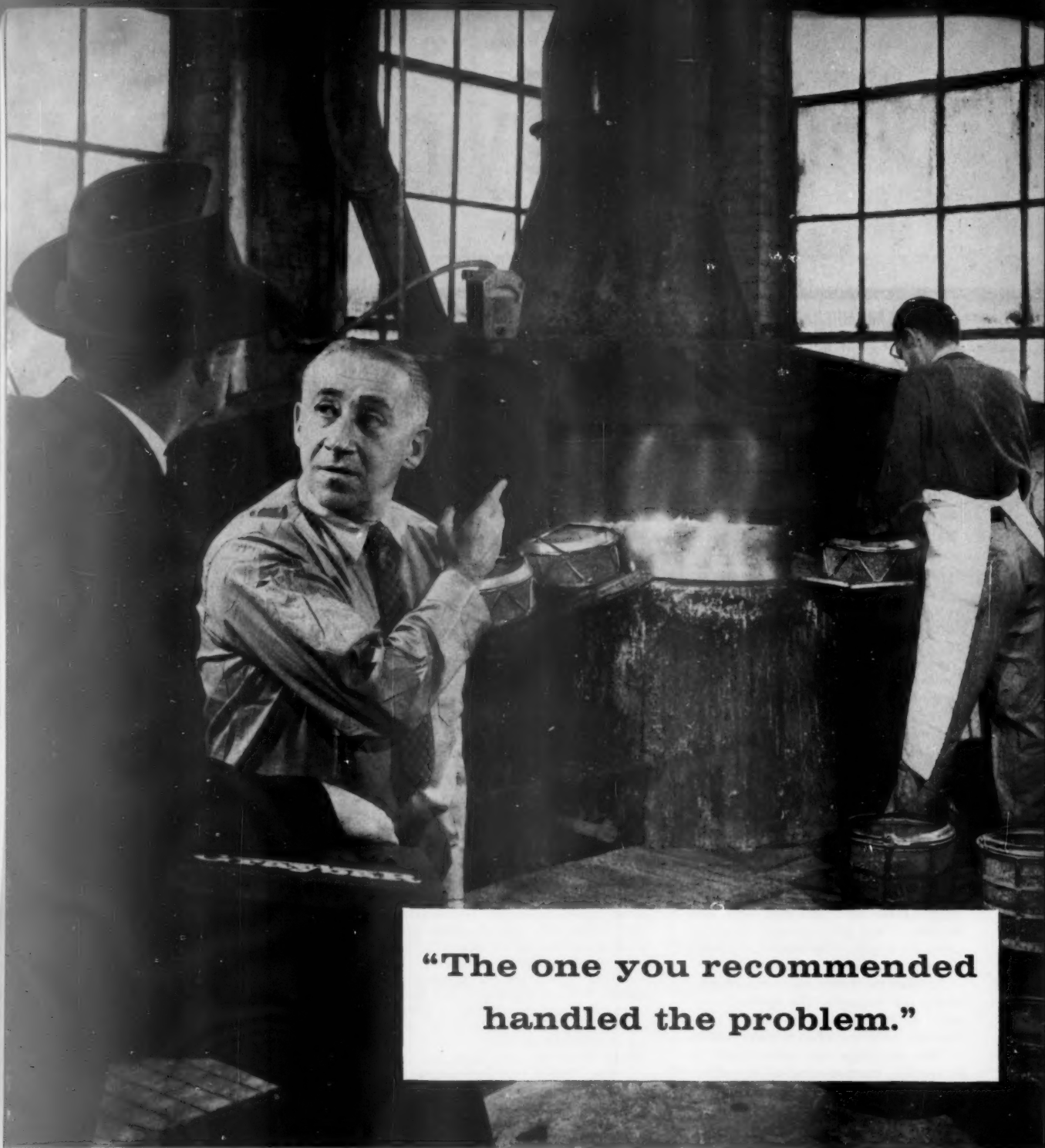
The program marks another step forward in Fafnir's policy of using the most advanced techniques in developing new and better bearings for industry.

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3





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# PURCHASING

The Methods and News Magazine For Industrial Buyers

JUNE 22, 1959  
VOLUME 46, No. 13

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B. P. MAST, JR.  
President

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Publisher

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## SPECIAL REPORT ON THE 44th ANNUAL N.A.P.A. CONVENTION

Does Management Get Value from Purchasing? ● Materials Management—Myth or Magic? ● Value Analysis-Standardization—The Open Door to Increased Profits ● Practical Tools for Better Inventory Decisions ● Survival of the Purchasing Agent in the Space Age ● The Economic Outlook ● Roundup of Commodity Reports ● The New President and His Committee ● Shipman Award ● The Convention's Social Side ● Inform-A-Show ● Plus Picture Pages of General Convention Activities

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EDITORIAL AND EXECUTIVE OFFICES  
205 East 42nd Street, New York 17,  
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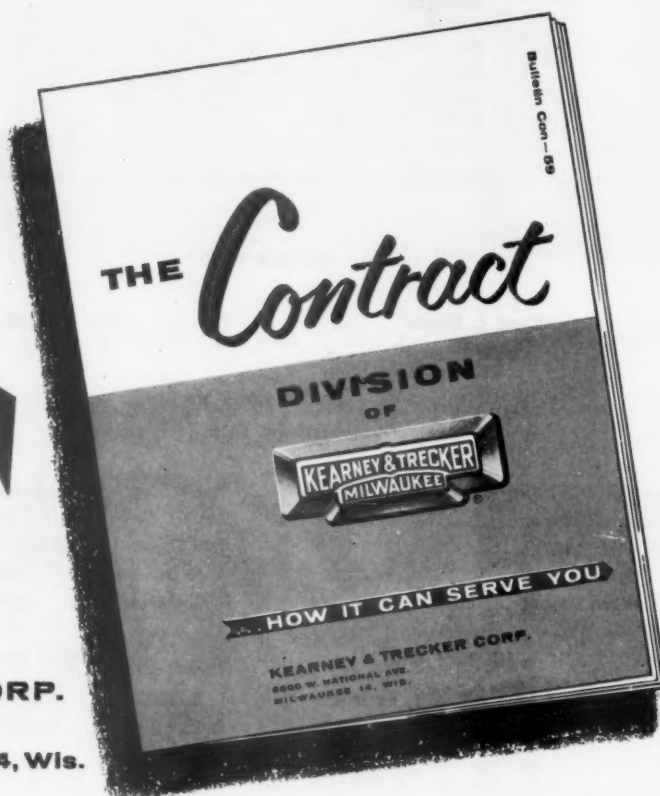
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## Pulse of Business

### The Second Half Outlook

Where is the economy going in the second half of 1959?

Of one thing you can be sure: it will be better than the last half of 1958. Economists, industry executives, and purchasing agents all agree that production in the next six months will be greater than in the similar period last year (see p. 13).

But how will business measure up against the first half of this year? The first six months of '59 was a boom period—as the recovery turned to prosperity and employment rose considerably. If the second half is to top that record—or even equal it—production will have to continue at this same fast pace.

Let's see how some of the important business areas shape up at the outset of the second half:

### Steel Buying Will Be Cut

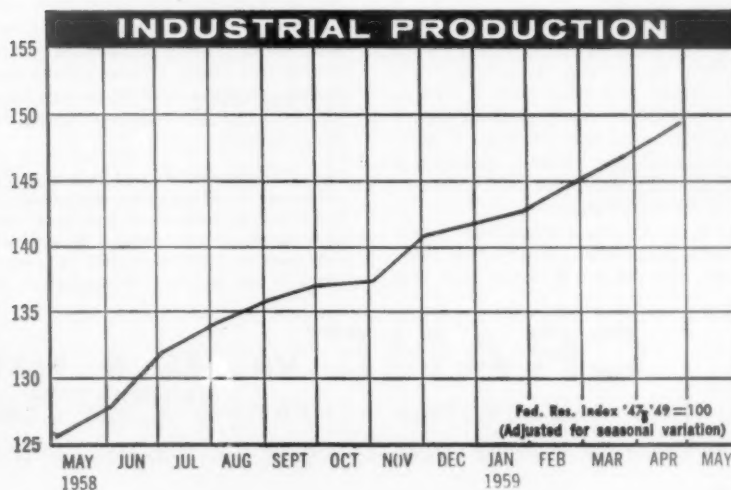
**Steel**—Any discussion of the economy must begin with industry's basic commodity—steel. The threat of a strike when labor contracts expire on June 30 has been an important factor in the heavy steel buying recently. Even if there is no walkout, purchases of steel in the last six months will probably decline.

The steel operating rate has been above 90% for the last few months. But actual steel consumption by industry has been at the rate of around 75%. The remainder has gone into the inventories that purchasing agents have been building up from the recession lows. With most steel stocks now at adequate or more-than-adequate levels—barring a lengthy strike—the second half won't be as good for steel producers as the first. But the entire year 1959 should still see an improvement of about 35% over 1958.

**Automobiles**—Another economic pacesetter, automobile manufacturing, had an excellent first half. Although production was lower than the records set a few years ago, around 3.2 million cars were turned off the Detroit assembly lines.

Because of the third quarter changeover period, second half production is never as high as the first. If the new 1960 models—which for the first time will feature American "small" cars—are accepted

The Federal Reserve Board's Industrial Production Index has climbed more than 15% above the recession low of April 1958, when the indicator was at the 126 level.





## Replaced leaking valves with Crane gates No leaks...no maintenance...in 2 years

New gate valves, installed on steam lines to and from a fire-watch pump at a gasoline plant, leaked continually, almost from the day they were installed.

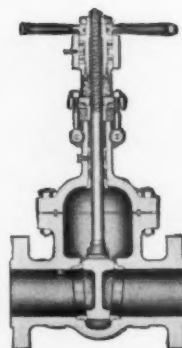
When frequent maintenance failed to stop the leaks, Crane steel wedge disc gates were installed. One valve was a 3-inch, 300-pound No. 33XR; the other one, a 4-inch, 150-pound No. 47XR—both rated for steam service at a maximum temperature of 850° F. Both valves have Exelloy discs and stems, and replaceable No. 49 Nickel Alloy, screwed-in body seat rings.

The switch to Crane valves was made two years ago. Since then, they have been in continuous operation. Not *one* leak has

developed—and not *one* cent has been spent for maintenance.

Get the jump on your costly maintenance problems. Make original as well as replacement installations with Crane valves and other piping materials. For all facts about the many Crane valves used for refinery, pipeline and other services, see your Crane Representative or write to the address below.

Typical cross section of Crane steel wedge disc gate valves widely used in refinery, power and process services. Available in sizes up to 48 inches; for oil or oil vapor, steam, air, gas, gasoline, water and other services. In seven pressure classes—150-pound to 2500-pound, with temperatures to 1100°F. Choice of trim materials is most complete. Write for details.



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## Pulse of Business

by the public, auto production in the last six months could reach the 2.3 million mark.

**Petroleum**—For the oil companies the second quarter was not as good as the first. And the outlook for the second half is that the level of business won't be as high as the first half.

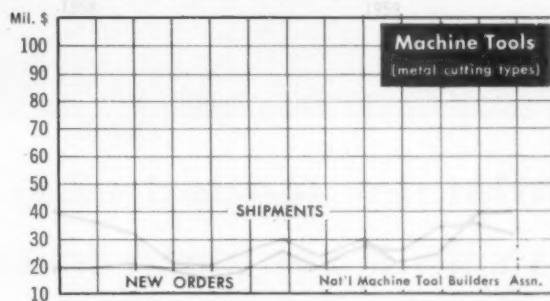
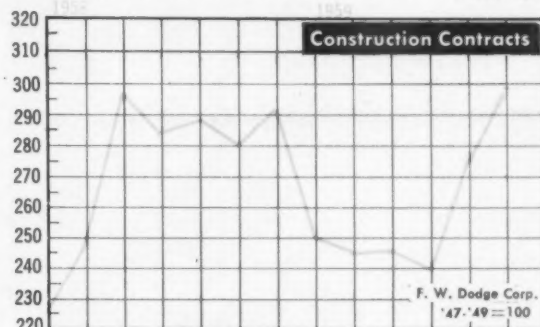
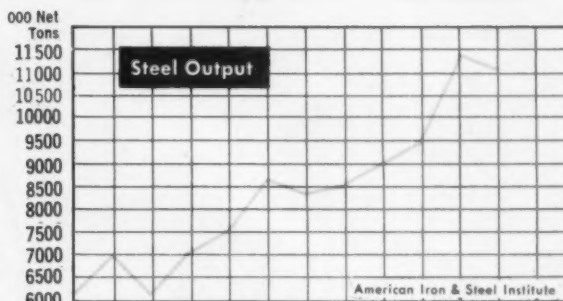
Petroleum prices should hold generally steady throughout the last six months. But normal seasonal changes—especially for heating oils—can be expected by purchasing agents later in the year.

**Rubber**—Again, a better first half than a second. One of the major reasons: the third quarter automobile changeover has a sharp effect on tire sales.

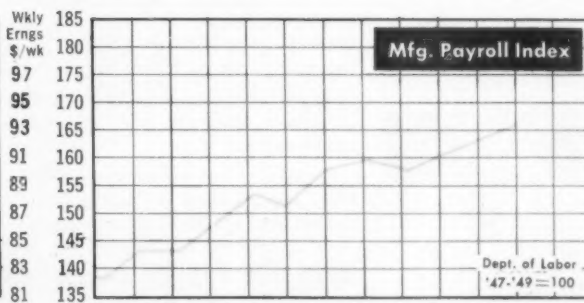
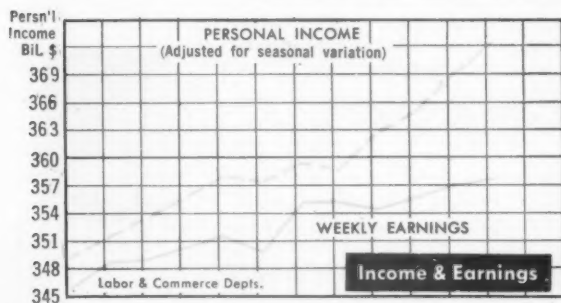
**Construction**—Public works construction will probably continue at the same high levels in the second half as in the first. Residential building will also maintain its strength—particularly if Congress increases the interest rate on V.A.-insured mortgages during this session.

Here's a sidelight on the current capital expansion program by industry: expenditures—for the most part—are being made for modernization and equipment rather than for plant

## PRODUCTION



## LABOR





## Aristoloy leaded user reports 25% reduction in time required to cut worm gear threads

Cutting threads on worm gears is an expensive, time consuming operation. Geometry is critical and a considerable amount of metal must be removed. One of the large manufacturers of "worms," desiring to increase production, found that by switching to a *lead*ed steel he could increase both speeds and feeds. Equally important, expensive cutting tools lasted longer because of the freer machining characteristics of leaded steel—delivering more pieces between grinds, and drastically reducing down-time for tool changes.

Strength and hardness tests on the finished part, after heat treating, indicated no detectable difference in physical properties from unleaded grades previously used.

For complete information about Aristoloy leaded or standard analyses carbon, alloy, and stainless grades, write for booklet entitled, "A Complete Line of Leaded Steels," and new Products & Facilities Catalog. \*Inland Ledloy License



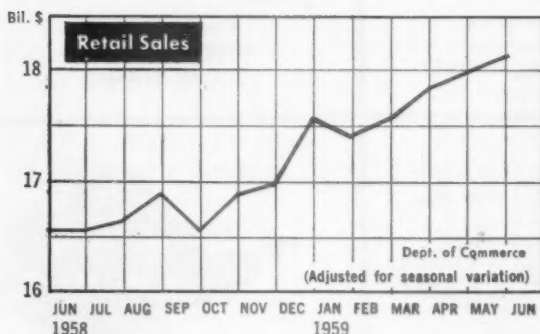
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# Pulse of Business

## TRADE



expansion. This trend began early in the first half and shows every sign of continuing throughout 1960.

**Textiles**—After an extended slump in recent years, the textile industry is in a substantially better position. Increased sales in the second half should reflect this position just as they did in the first six months.

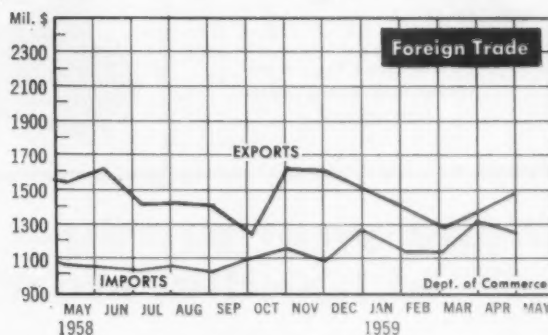
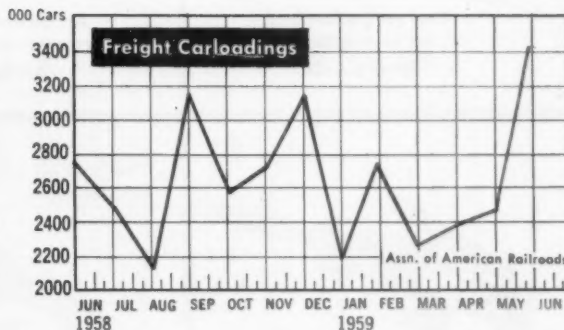
Prices of textiles advanced in the first half above the low point of a year ago. However, the president of a major textile company points out that despite this rise, "textile prices are lower today than they were ten years ago."

**Retailing**—Retail sales in the first half were higher than in the latter part of '58. Second half sales will probably top first half figures—even though the rate of gain may not be as great.

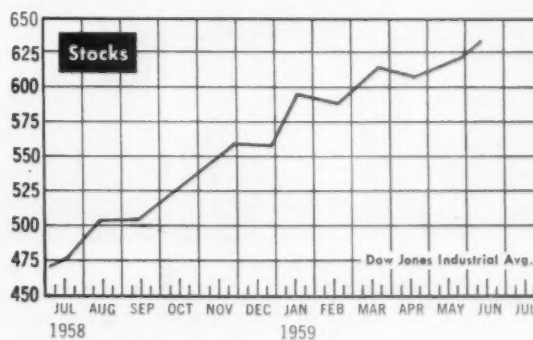
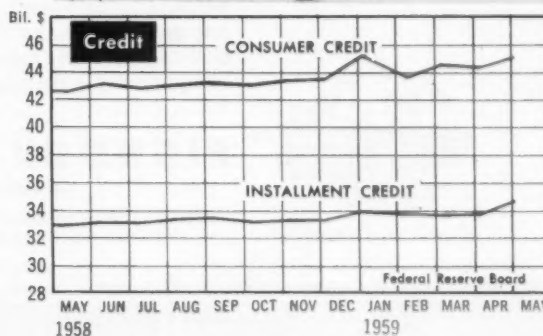
Stable prices should be maintained at least through the important fall selling season. But price hikes in certain products—like shoes and woolen clothing—can be expected.

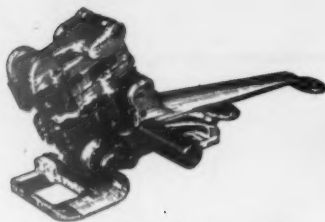
**What does this all add up to?** It means that we're going to have a good second half—although not as good as the first half. A major uncertainty is, of course, what happens in the steel industry. But you can be certain of this: the profits of most companies for the year will be better than they have been since 1957.

Already we've had companies reporting greatly increased earnings. And many other corporations are predicting record or near-record profits and volume in 1959. This comes as some of the best news in a long time to American businessmen.

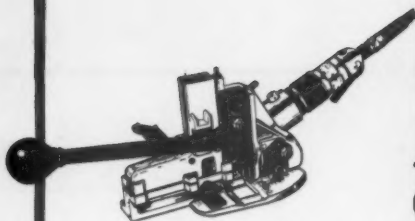


## FINANCE

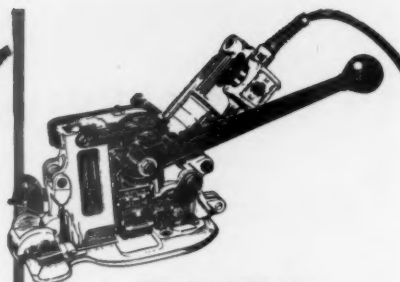




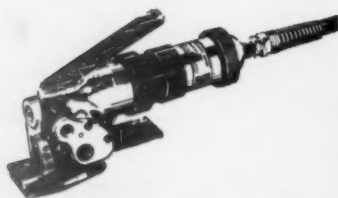
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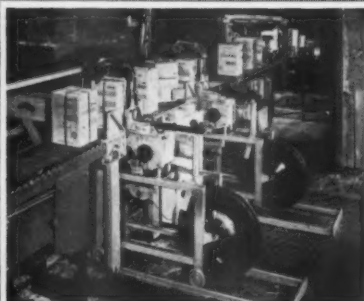
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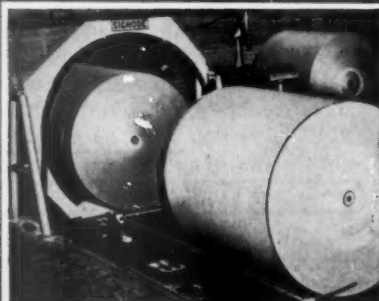
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Model PSF



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Fully automatic roll and coil  
strapping machines Model M2ORB

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## The P.A.'s Outlook

- P.A. Concern Over Steel Strike Grows
- N.A.P.A. Cites Problem Of Inventory Balance
- Local Assns. Report Upturn in Business

AS THE threat of a strike in the steel industry draws closer, P.A.'s are becoming increasingly concerned over business conditions in the third quarter.

This is reflected in their responses to PURCHASING Magazine's Business Confidence Poll. The June index dropped five points to 101 (1958=100).

Nevertheless, 69% of the purchasing agents queried predict better business conditions in their own industries in the next three months. Slightly over 20% believe business will stay on the same level, while the remainder feel conditions will get worse.

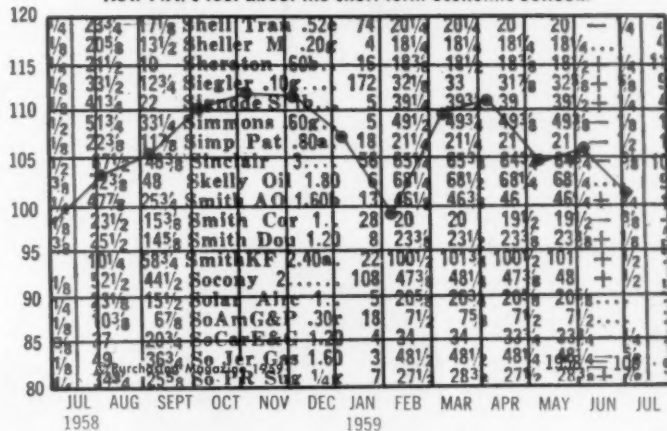
#### Associations Optimistic

Recent reports of various P.A. business survey committees express a generally optimistic attitude. This includes reports from the National Association of Purchasing Agents and the Chicago, Cleveland, Pittsburgh, Georgia, Youngstown, and Canadian associations.

In the N.A.P.A. business survey, 42% of those polled "now believe the third quarter this year will be better than the second and 29% think it will be worse. An overwhelming 85% predict that this third quarter will be better than the similar period in 1958 and only 3% see it as poorer."

### BUSINESS CONFIDENCE INDEX

How P.A.'s feel about the short-term economic outlook.



The Business Confidence Index—based on purchasing agent opinion of the short-term business outlook—fell five points this month to 101 (1958=100). The drop undoubtedly reflects P.A. concern about the possibility of a steel strike at the end of the month.

The committee reports "it is becoming more difficult to maintain proper raw material inventories and still display reasonable prudence in forward commitments . . . Aside from steel items, (buyers) will not make any speculative purchases beyond those called for by orders on the books."

The Chicago association notes that "the general business outlook continues with a healthy atmosphere. It cites higher production, employment, and hedge buying."

#### Upturn at Peak

The Cleveland business survey committee says "the general business upturn we have been experiencing for the past several months seems to have about reached its peak for most industries in the area." And it adds, "Members are now willing to be a bit more optimistic

about the third and fourth quarters." A slight rise in commodity prices is also noted.

Reports the Pittsburgh group: "Inventories in the tri-state area showed a slight increase, triggered by the shortening strike deadlines and the possible round of price increases that follow in the wake."

The Georgia association says its reports from members "reflect improvement in business."

Here's what the Youngstown association states: "Business activity will grow and expand through the year 1959. On a long-term basis, this uptrend will continue for the next four years."

And the Canadian group reports "indications are that business has regained some of its momentum after the levelling off . . . Any summer decline that materializes will be offset to a considerable extent."



That's exactly what Inland's technical chefs will do when its giant, new sintering plant is completed in June. A single day's mix—4300 tons of iron ore particles, 500 tons of crushed limestone, 250 tons of fine coke—will bake a cake of clinkers which can be fed directly into blast furnaces. Result—better, faster reduction of raw iron ore to pig iron, blast furnace production upped 10%—*more and more Inland steel to feed the hungry production lines of fast-expanding Mid-America manufacturing!*

*Building Today with an Eye to Tomorrow*



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## Price Trends

- **Buying of Nonferrous Metals Increases**
- **Threat of Mine Strikes Has P.A.'s Worried**

**T**HE NONFERROUS metal markets have been active in recent weeks. Purchasing agent interest in copper, lead and zinc has stepped up considerably during June.

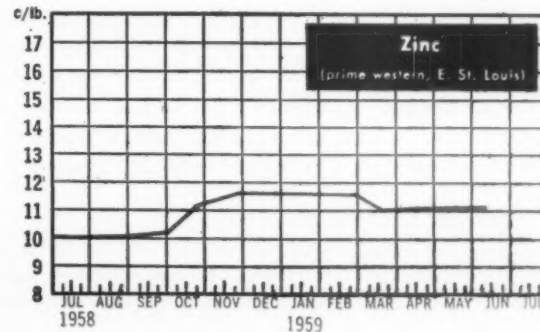
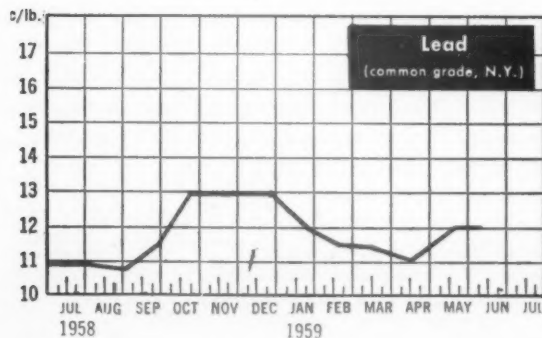
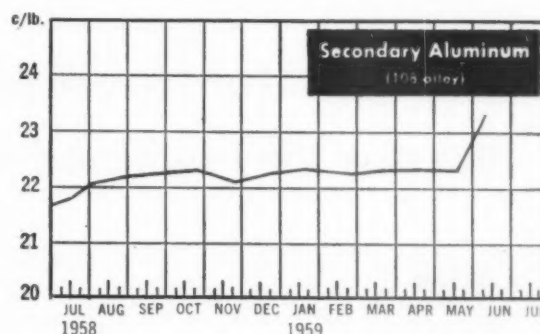
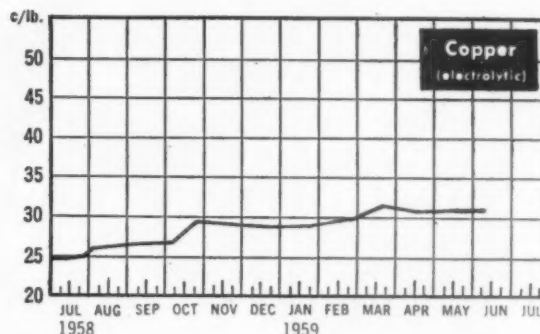
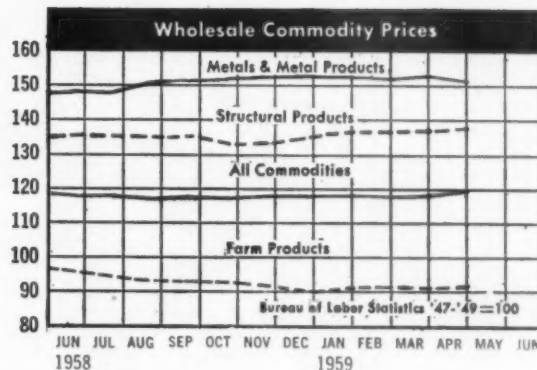
Here's a rundown of the current situation in the more important metals:

**Copper:** Although P.A.'s usually taper their copper purchases in July, many have started to place larger-than-usual orders for next month. The threat of a strike at the mines, the necessity to build up inventories, and heavy consumption rates are the reasons for the increased purchases.

Shipments of ingot brass and bronze this year have greatly exceeded 1958. Almost 100,000 tons were sold in the first four months alone, compared with around 75,000 tons last year.

**Tin:** The International Tin Council has decided to increase third quarter export quotas by 2000 tons to 25,000 tons. Although demand throughout the world is likely to be greater than this amount, the threat of Russia's entry into the West European tin markets was one of the reasons for keeping the quotas at a conservative level.


(Turn Page)



Formerly, slip rings were reground every 6 to 8 weeks!



## Slip ring motor trouble ended here May 23, 1958!

(the day they switched to  **NATIONAL** Brushes)



LOUIS J. ESPOSITO

*Scene:* a busy mid-western ore washing plant. *Problem:* threading and grooving on slip ring motors. Two months seldom went by without an expensive regrounding job on every motor, says "National" Carbon Brush Man Louis J. Esposito.

Lou first determined the cause of the trouble by analyzing workloads and the resulting current requirements. His recommendation: "National"

Brush Grade AY. *Result:* no more slip ring trouble.

Not only did a costly problem disappear, but plant management also was able to release service facilities for better maintenance elsewhere.

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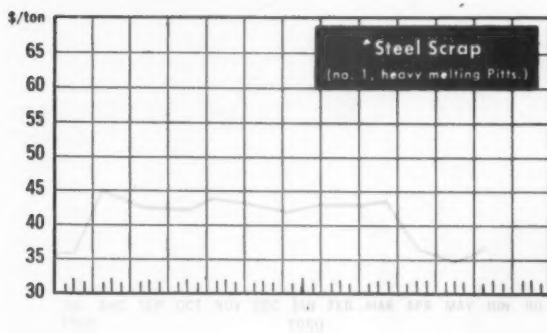


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PURCHASING



## Price Trends



The new quotas indicate fairly stable conditions in tin at least through the next three months. Of course, an extended strike in the steel industry could affect tin sales in the fall.

**Lead:** A strike at the lead mines and refineries next month is a possibility purchasing agents have to contend with. Therefore, they have been building up inventories.

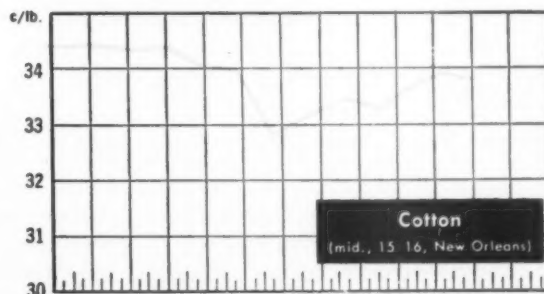
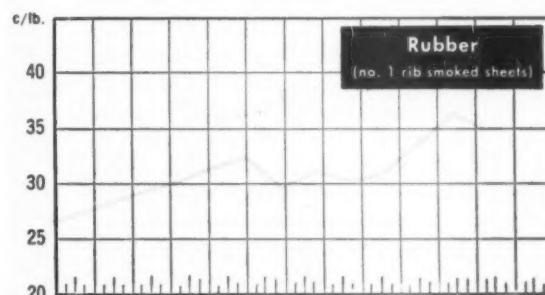
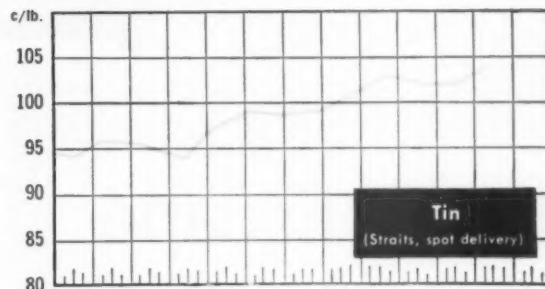
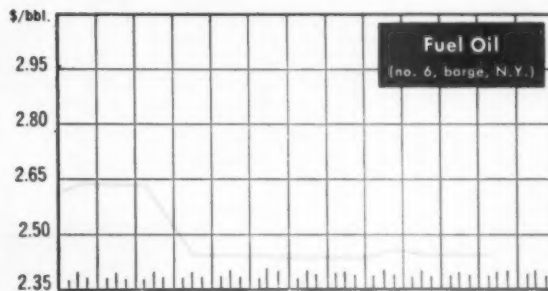
This sustained demand is exerting upward pressure on prices. However, the unusually wide gap between the prices on the New York and London markets is helping to maintain the present domestic price.

**Zinc:** Zinc sales last month were at a very high level. On the basis of current demand, shipments this month should also be high—thereby reducing stocks at the smelters.

Special high grade zinc is in great demand. In addition to the automobile manufacturers, other industries have increased their buying of this grade.

**Aluminum:** Demand for aluminum in the third quarter will probably be even higher than in the second. For the year, there's a chance total consumption will hit 2.3 million tons—a 30% increase over the previous year.

Many producers have been opening or reopening potlines to meet the demand of metal fabricators. The production rate of primary producers is currently around 85% of capacity.





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San Francisco Sales Office, Saratoga, Calif.

Seaboard Pacific Division, Gardena, Calif.

Cleveland Sales Office, Cleveland, Ohio

Dunbar Brothers Division, Bristol, Conn.

Wallace Barnes Steel Division, Bristol, Conn.

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## Pulse of Business

### Sales, Inventories, Orders

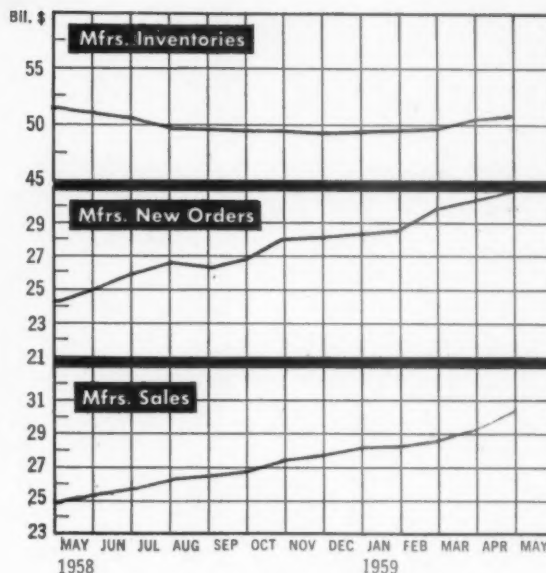
#### • April Sales & Orders Reach New Records

**M**ANUFACTURERS' sales and new orders rose to new highs in April, according to the Department of Commerce. Inventories also increased.

Seasonally-adjusted sales totaled \$30.2 billion. Shipments by durable goods manufacturers were up 5% from the previous month, while nondurables producers showed a 3% gain. The largest percentage increases were registered in steel and transportation equipment.

New orders rose to \$31.0 billion. Sharp advances in incoming business in the durables area were notched by primary metal and aircraft companies.

Inventories were at the \$50.8 billion mark. This was a \$500 million advance over March, the largest rise this year. Two-thirds of the increase was in durables.



Dept. of Commerce—Seasonally adjusted

#### Manufacturers' Sales Seasonally Adjusted (Millions of Dollars)

All Manufacturing Industries.....	1958	1959
Durable-goods industries.....		
Primary metal.....	1,657	2,256
Fabricated metal.....	1,302	1,586
Machinery.....	3,748	3,975
Transportation equipment.....	2,466	3,184
Lumber and furniture.....	791	884
Stone, clay, and glass.....	605	655
Nondurable-goods industries.....	13,413	14,522
Food and beverage.....	4,348	4,481
Tobacco.....	373	414
Textile.....	1,016	1,079
Paper.....	874	955
Chemical.....	1,832	2,004
Petroleum and coal.....	2,594	2,970
Rubber.....	429	518

1958		1959			
Apr.	Dec.	Jan.	Feb.	Mar. (r)	Apr. (p)
24,945	28,135	28,143	28,481	29,106	30,232
11,532	13,613	13,541	13,870	14,376	15,123
1,657	2,256	2,230	2,421	2,580	2,792
1,302	1,586	1,537	1,526	1,605	1,667
3,748	3,975	4,017	4,131	4,226	4,400
2,466	3,184	3,167	3,168	3,188	3,383
791	884	879	894	918	991
605	655	668	677	731	759
13,413	14,522	14,602	14,611	14,730	15,109
4,348	4,481	4,522	4,479	4,465	4,546
373	414	428	428	416	418
1,016	1,079	1,102	1,140	1,200	1,241
874	955	942	977	988	1,036
1,832	2,004	1,932	1,930	1,979	2,083
2,594	2,970	3,043	3,037	3,046	3,059
429	518	508	490	506	n.a.

#### Manufacturers' Inventories Seasonally Adjusted (Millions of Dollars)

All manufacturing industries.....	1958	1959
Durable-goods industries.....		
Primary metal.....	4,362	4,100
Fabricated metal.....	2,925	2,927
Machinery.....	9,744	8,914
Transportation equipment.....	6,863	6,574
Lumber and furniture.....	1,783	1,740
Stone, clay, and glass.....	1,233	1,200
Nondurable goods industries.....	22,062	21,346
Food and beverage.....	4,765	4,646
Tobacco.....	1,896	1,904
Textile.....	2,606	2,469
Paper.....	1,468	1,443
Chemical.....	3,839	3,748
Petroleum and coal.....	3,441	3,264
Rubber.....	1,047	994

51,486	49,209	49,503	49,861	50,323	50,825
29,424	27,863	28,117	28,373	28,846	29,159
4,362	4,100	4,180	4,280	4,372	4,364
2,925	2,927	2,993	3,069	3,120	3,189
9,744	8,914	9,030	9,063	9,155	9,317
6,863	6,574	6,578	6,608	6,806	6,893
1,783	1,740	1,702	1,702	1,722	1,706
1,233	1,200	1,207	1,201	1,205	1,226
92,062	21,346	21,386	21,488	21,477	21,666
4,765	4,646	4,669	4,740	4,752	4,824
1,896	1,904	1,981	1,902	1,876	1,891
2,606	2,469	2,487	2,476	2,451	2,457
1,468	1,443	1,451	1,459	1,462	1,479
3,839	3,748	3,764	3,744	3,742	3,763
3,441	3,264	3,264	3,273	3,286	3,312
1,047	994	1,013	1,032	1,030	n.a.

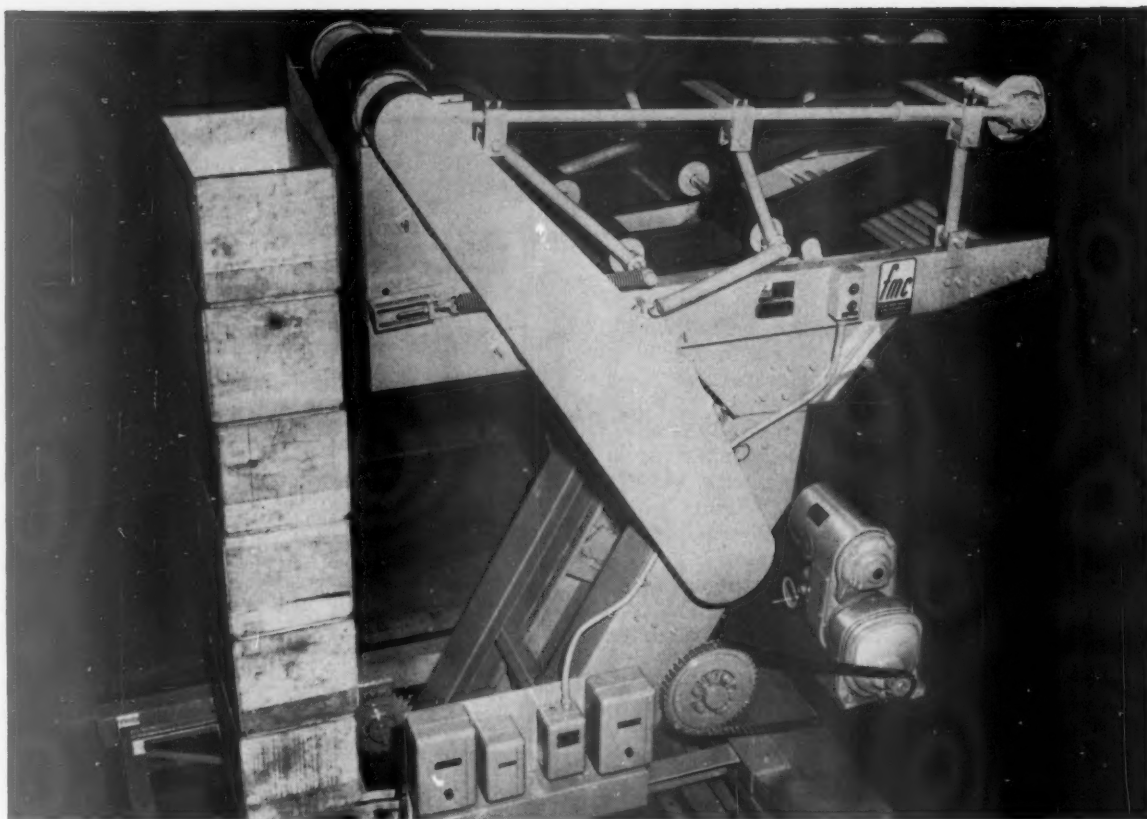
#### Manufacturers' New Orders Seasonally Adjusted (Millions of Dollars)

All manufacturing industries.....	1958	1959
Durable-goods industries.....	10,833	13,673
Nondurable-goods industries.....	13,665	14,692

24,498	28,365	28,502	29,702	30,214	30,995
10,833	13,673	13,900	14,918	15,308	15,582
13,665	14,692	14,602	14,784	14,906	15,413

(r) Revised.

(p) Preliminary.



**"BECAUSE RELIABLE SPEED CONTROL IS VITAL..."**

## **FOOD MACHINERY & CHEMICAL CORPORATION SPECIFIES STERLING SPEED-TROL VARIABLE SPEED DRIVES!**

Designed to handle a varying load of from 8 to 24 boxes of fruit per minute, Food Machinery's Model 384000 Series Automatic Stack Elevating Box Dumper is powered by a Sterling Speed-Trol Variable Speed Drive for accurate control of operation throughout the range of packing requirements.

"We have specified Sterling Speed-Trols because reliable speed control is vital in equipment of this type," says E. A. Verrinder, Chief Engineer of Food Machinery's Packing Equipment Division. "Our machine is designed to adjust the flow of fruit to accommodate varying quantities of incoming fruit, and to match the flow of fruit to the number of workers on the processing line. Through the Speed-Trol's infinite control of speed, speed can be quickly, easily and accurately changed as required."

"Our long and successful experience with Sterling Speed-Trols has proven to us...and to our customers... that these variable speed drives provide the dependability and efficiency required for our packing equipment."

**Only STERLING SPEED-TROL provides these features for reliable speed control:**

- Positive coordinated control of both pulleys—"nosprings."
- Maximum pulley life because:
  - (1) variable pulleys ride on hardened, chrome-plated, precision-ground, keyed shafts;
  - (2) large grease reservoirs provide a film of protecting lubricant.
- Longer belt life...no additional load from spring.
- Greater safety...No injuries from spring flying loose during maintenance.



For additional information about the unique advantages of Sterling Speed-Trol, ask for your free copy of Bulletin 195. Write to:



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**PURCHASING**



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with Gates Vulco Ropes**



Gates brings you, through *Specialized Research* in V-Belts, another important cost-saving advance:

Now—at no increase in price—the horsepower rating of Gates Vulco Ropes has been increased 40%.

As replacements on standard drives, these V-Belts with 40% more load carrying ability will give longer service. Longer life reduces down-time, and cuts belt replacement costs.

And as the tag tells you: Belts labeled “Gates Vulco Rope” or “Gates Hi-Power” are identical in construction and can be used interchangeably in matched sets.

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William McChesney Martin, Jr., chairman of the Federal Reserve Board, wants the discount rate raised. If it is, it will mean higher interest rates for industry and small businessmen.

### The Government Program: Lengthening the Boom While Fighting Inflation

**G**OVERNMENT economic policy is currently being aimed at two objectives: (1) to stretch out the boom, and (2) to hold prices within a range that will not set off another round of inflation.

The recovery has been under way for over a year now. There are signs that while the major impetus to business so far has been increased consumer purchasing, government spending, and inventory buying, a new and important factor is appearing.

This is a capital boom, which appears to be on the way. Government economists see signs of a major pickup in capital spending, and forecast that it will pick up momentum in the last half of this year.

The recovery has been fairly well diffused up to now. No one industry has been leading the economy. The auto industry has been improving its performance over last year, but has not been achieving any all-time heights.

Construction has been going ahead at record levels, showing the greatest single area of strength in the economy. But at the same time that homebuilding has been booming, industrial and

office construction has been off.

The Administration view is that the business recovery is on a sound basis. However, some capital expansion in industry has been held off and some hiring will be deferred until prices and wages are more stable.

#### • Boom Boosts Outlook For Balanced Budget

The government is feeling more confident in its money management techniques. Why? Because the outlook is that tax revenues will be better than expected.

The pace of the recovery is expected to boost tax payments by both corporations and individuals. Therefore, there is now a chance for a balanced budget in fiscal 1960. There is even the possibility of a moderate surplus.

With these prospects for greater fiscal stability, the Administration now is moving toward marketing long-term securities. To make such securities attractive of course, calls for the payment of higher interest rates. This is significant to purchasing agents because interest paid by the government affects the cost of money to industrial and commercial borrowers.

The Federal Reserve Board has been increasing the discount rate in successive stages, and from

all current indications even higher rates are considered likely. If and when the government pays out higher interest rates, a firm prop will be placed under the increases in interest rates for commercial and industrial loans.

#### • OCDM Seeks Solution To Stockpile Dilemma

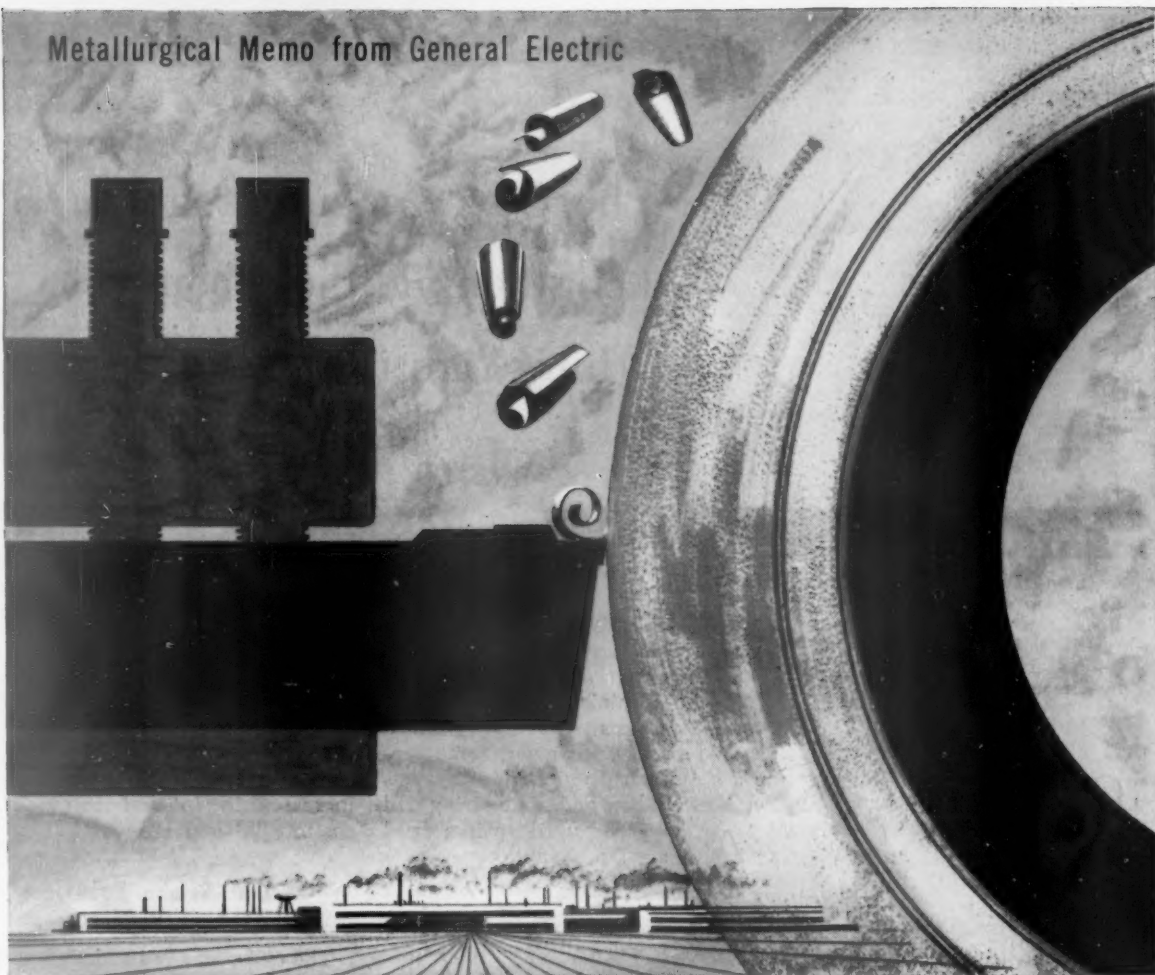
The Office of Civil and Defense Mobilization is still looking for a way out of the materials stockpiling dilemma.

One complicating factor is that there isn't just one materials stockpile—there are literally a half-dozen. First there is the strategic stockpile, roughly a \$6 billion accumulation of materials which are earmarked for use in the event of war.

These materials are stored in 216 locations, much in the form of ore which can be stored in the open. Nevertheless, it costs some \$16 million to store these materials. Where the materials are perishable—as in the case of rubber, coconut and palm oil, manila hemp, and sisal fibers—the stockpiles are rotated.

In addition to this huge stockpile, there is a large inventory of stockpiled materials accumulated separately under the Defense Production Act. During the Korean war, it was decided that

Metallurgical Memo from General Electric



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242 sizes to speed changeovers on every job

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*Carboloy Lift-O-Matic toolholders do this job.* There are now three types—positive rake, negative rake, and tracer. All provide access to the clamp setscrew from either top or bottom—together with a self-raising chip-

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## Washington Report

our capacity to produce certain materials had to be expanded. As an incentive for such expansion, the government entered into purchase contracts to buy the materials at a fixed price. Roughly a billion and a quarter dollars have been paid out to buy these materials (which are valued today at about \$900 million).

There is still a third stockpile, known as the Supplemental Stockpile, consisting of metals and minerals costing about \$360 millions. Lead, zinc, chrome, ferro manganese, ferro chrome, and some bauxite are in this group. These materials were acquired under the Agricultural Trade Development and Assistance Act from various foreign producers in exchange for surplus U. S. food products.

A fourth official stockpile is the Commodity Credit Corporation inventory of materials acquired through barter under the same law, but not yet shifted over to some other stockpile. This amounts to some \$265 million.

The fifth stockpile is about bare, but legally it still constitutes a stockpile. It is held under Public Law 737, the Domestic Purchase Act.

Finally, there is the Small Tin Stockpile, consisting of tin purchased from the Texas Tin Smelter. The value of this material totals about \$9½ million.

The Defense Production Administration would like to sell some of these materials, and occasionally it can. But generally, when the DPA sees an opportunity to market part of its huge surplus, members of Congress from the mining areas block the sale. What the DPA now recommends is that the six stockpiles be consolidated, thereby making them subject to the same handling and disposal procedures.

### ● Push Space Contracts For Small Business

The National Aeronautics and Space Administration is making an effort to get as many smaller

companies as possible into the space business.

The Small Business Administration has a listing of "research and development firms," which includes some 1,500 companies. But the space agency wants to build a file of companies that can become either a prime or a subcontractor. NASA is interested in companies with a research and development capability, especially those with a background in electronics. In addition to informing small firms of upcoming contracts, NASA will review major contracts with prime contractors to determine whether small firms can subcontract or provide parts.

The Procurement Officer, NASA, 1520 H St., NW, Washington 25, D.C., is handling all queries about getting into the space business.

### ● Commerce Dept. Studies Growth of Industries

A Department of Commerce study of industry growth shows some products maintaining a pattern of fast growth in the post-war years. Others have had a period of fast growth followed by a decline, while some items have had a fast postwar growth period that has since been checked.

Examples of fast growth that has not been checked include vitamins, antibiotics, power lawn mowers, soft wood plywood, plastics, resin materials, polyethylene, and synthetic fibers (excluding rayon).

Products that showed quick growth immediately after the war, but which have tended to slow down in recent years include: frozen foods, freezers, dryers, cellophane and primary aluminum. And these items have had a rapid growth which was later checked: sulfa drugs, television sets, synthetic rubber, off-highway tractors, diesel-electric locomotives, and pick-up hay balers.

As a case study of a product with rapid post-war growth later

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# HARDINGE

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Style "S"

Master Collets and Pads

The only Master Collet with No Work Pressure on the Screw.

Available for: Cleveland, Cone, Greenlee, Gridley, Acme-Gridley, National Acme, New Britain and Warner & Swasey.



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Pads cannot work loose. No screws — No Pins

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One Source of Supply for all your collet, feed finger and pad requirements, means purchasing economy.

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"WHY THEY  
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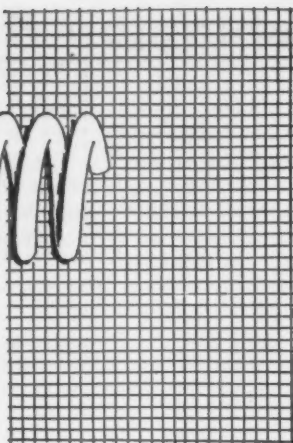
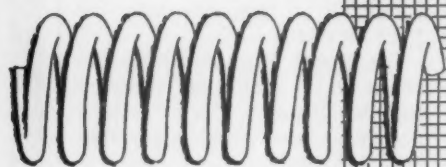


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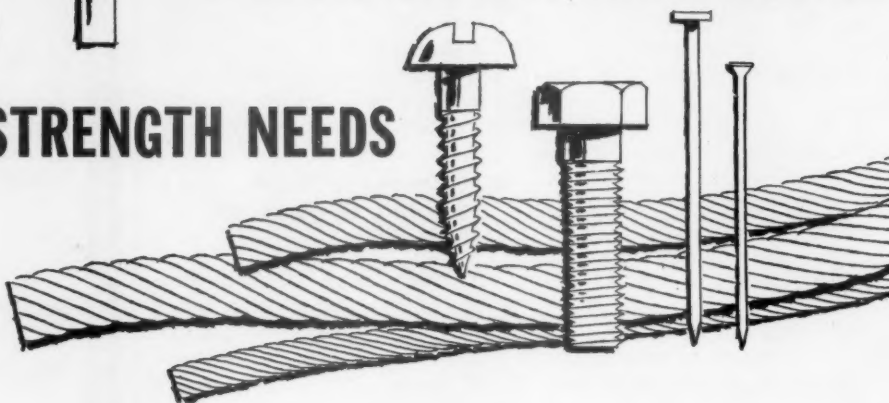


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**AND HIGH STRENGTH NEEDS**



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If you make springs, you get uniform tensile strength in every batch of spring wire . . . and also with rope wire.

In weaving wire you get the same dead-soft temper and uniform properties for perfect weaving without ridges.

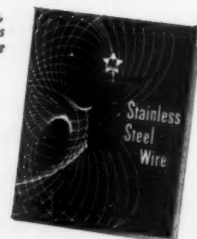
In cold-headed wire you get absolute uniformity that ties in with automation production processes.

Call on the A-L technical staff for help with selection or fabrication problems, or help in cutting shop costs in processing operations. They will be glad to work with you.

Whatever you make in stainless wire, Allegheny Ludlum offers you adequate stocks of all standard grades for fast shipment. Special stainless steel wire on order.

**Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pa. Address Dept. P-18.**

*Write for your copy of Allegheny Stainless Wire, illustrated 20-page booklet, which fully describes analyses, physical properties, corrosion resistance and principal applications of stainless wire.*



WSW 7899



**ALLEGHENY LUDLUM**

for warehouse delivery of Allegheny Stainless, call RYERSON

Export distribution: AIRCO INTERNATIONAL

**EVERY FORM OF STAINLESS . . . EVERY HELP IN USING IT**

## Washington Report

checked, the Commerce Department reviews the marketing history of television sets. Consumer acceptance of television receivers was especially rapid in the early years of development. Production during this period was high, and prices were marked down.

Production reached a peak in 1955 when 7.8 million units were manufactured. This was only a little higher than the total for 1950. Since then, the number of receivers has declined steadily. Last year, it dropped to 4.9 million, the lowest in nine years.

In the case of television receivers, the market reached the near-saturation point within a relatively short period of time. According to the analysis, this point was reached in a shorter period of time than that of any other major type of household consumer durable goods.

### ● British Cut Steel Prices to Spur Buying

The British announcement of a 2% price reduction for quantity buyers of steel is not considered significant here. That's because many buyers realize they have to pay extra transportation and handling charges on overseas steel. And they're not inclined to change their buying habits overnight.

The market for both British and German iron and steel did not drop off as quickly in '58 as it did in the United States. But the recession has continued for the European producers in contrast to the American recovery.

There are signs of a pickup and the reduction in price is considered an inducement to spruce up domestic steel buying. The cuts, however, are not especially important in selling iron and steel for export.

European iron and steel producers have been steadily increasing sales to U. S., with volume running between one to two million tons a year. The sales are largely merchant steel products—construction steel, wire rod, wire nails and barbed wire.—A. N. Weckler

## Corrugated box with built-in protection



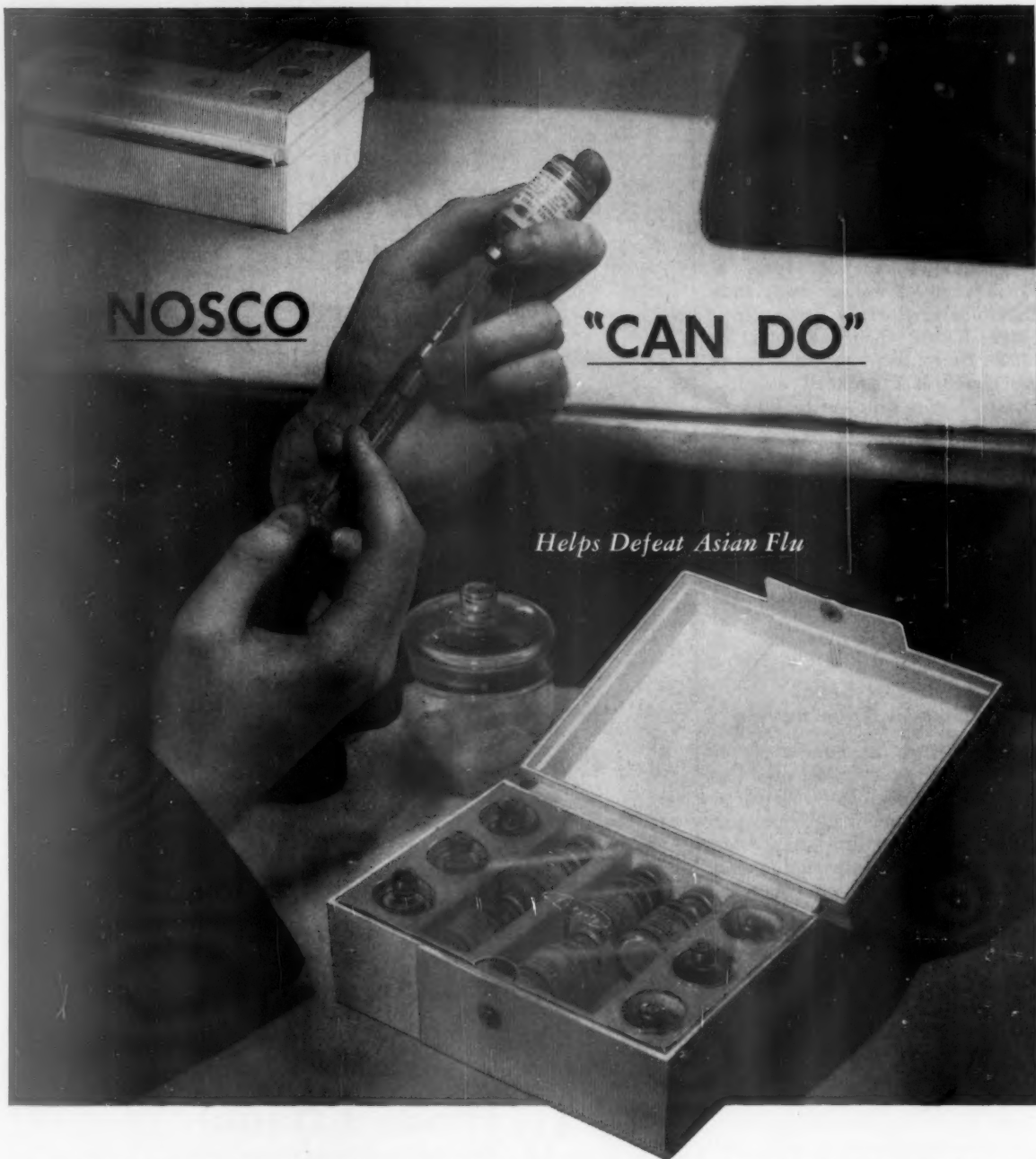
Hotpoint ovens travel to kitchens in custom-designed Hinde & Dauch shipping boxes. Interior packing prevents damage, keeps appliances in factory-new shape. Does your product need king-size protection? Better see H & D.



## Hinde & Dauch

Division, West Virginia Pulp and Paper

AUTHORITY ON PACKAGING • SANDUSKY, OHIO  
15 FACTORIES • 42 SALES OFFICES



**NOSCO**

**"CAN DO"**

*Helps Defeat Asian Flu*

Yes, Nosco's famous "Can Do" ingenuity is contributing to a healthier America. Where doctors are fighting Asian Flu, you'll find this custom-molded Nosco Biological Kit by their side.

Lederle Laboratories wanted to make their precious flu vaccine easier for doctors to preserve and transport. They came to Nosco with their special requirements for a multi-vial carrying case. The container had to demonstrate striking clinical cleanliness and easy washability. Great shock resistance and chemical inertness were also necessary. And cost was important.

Nosco said "Can Do" and began transforming customer specifications into practical design. From flexible polyethylene they molded the container with an integral hinge for connecting the base and cover. A white expandable styrene liner was assembled

into the base to give additional shock and thermal insulation. Further protection is provided for the vials by the clear acrylic panel, which hinges freely with the case by means of integral pivot lugs.

Nosco's finishing department hot stamped "BIOLOGICALS" into the cover and crimped male and female eyelet elements into the case. Finally, the assembled composite units were individually plastic-bagged to preserve the clinical quality.

Complex projects like this biological kit are routine at Nosco. In injection molding and decorating, Nosco "Can Do" is time tested. Let us show you how these skills can produce your plastic parts in volume and at reasonable costs. For more information, just write or call.

**NOSCO plastics, inc. • erie 5, pa.** *One of the world's great injection molders.*

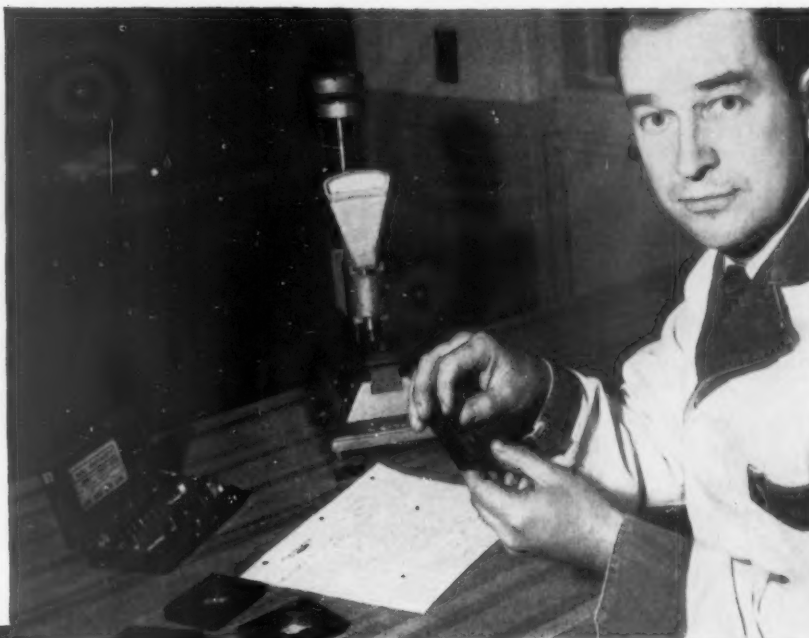
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**PURCHASING**

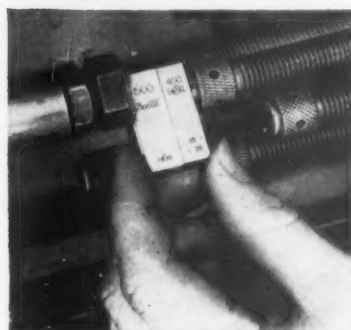


# NEW!

## DoALL 56-R GAGE BLOCK SET



A single block can be used as either "go" or "not go" gage to measure this snap ring groove.



Gage blocks take the guesswork out of setting up automatic turret lathes and chucking machines.

## Most Practical Set for Shop Use

**More Useful Dimensions with Fewer Gage Blocks!** The new DoALL 56-R set introduces a new concept in gage block usefulness by providing widely specified decimal and fractional dimensions that are not readily available in traditional sets.

Employed is a revised mathematical system that allows you to make common dimensions with fewer blocks—the first major improvement since the 86-piece set was introduced many years ago. In addition, this 56-piece set enables you to greatly reduce the time-consuming job of selecting, cleaning and wringing.

## See How This Set Saves Time and Money

Ask your local DoALL gage specialist to show you how much easier, faster and less expensive it is to use DoALL's new 56-R set. The moderate price of the 56-R set makes it practical to assign a set to each of your toolmakers or machinists. This will eliminate the time waste created by a group working from the same set. They'll find the 56-R set has the most useful dimensions for setups, pre-production runs and shop inspection work... also stops rejects before they happen by reducing the risk of measurement transfer errors. Call your local DoALL Sales-Service Store or write:

		GAGE BLOCK SET NO. 56-R	
Available in Three Grades		.010" (single block) —	.010" series
AA Grade	+ .000002" — \$490.00	.020" through .030" (11 blocks) —	.001" series
	— .000002"	.1001" through .1009" (9 blocks) —	.0001" series
		.101" through .109" (9 blocks) —	.001" series
A+ Grade	+ .000004" — \$340.00	.110" through .190" (9 blocks) —	.010" series
	— .000002"	.100" through .400" (4 blocks) —	.100" series
		1.000", 2.000", 3.000" (3 blocks) —	1.000" series
A Grade (Shop-Blocks)	+ .000006" — \$240.00	1/64", 1/32", 3/64", 1/16",	
	— .000002"	1/8", 1/4", 1/2", 3/4" (8 blocks) —	Fract. series
		.050" or .100" steel or carbide wear blocks optional	

GB-31



THIS IS A  
TYPICAL DoALL STORE

The **DoALL** Company, Des Plaines, Illinois



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JUNE 22, 1959

29

*Automotive Power Steering Manufacturer Specifies*

# OSTUCO *Mechanical Seamless Tubing*

## FOR SURFACE FINISH

Cold drawing Ostuco tubing through precision ring die on cold draw bench at Shelby mill. Mandrel controls and sizes I.D.

“Automotive components are our business. We have produced literally millions. And we're still learning every day.

“One of the lessons we learned early in the game is that you can't beat Ostuco tubing for surface finish. It cuts our machining costs, keeps us on top competitively.

“There are other reasons, too, why Ostuco tubing tops our preferred list. We like its consistently close tolerances and unvarying quality, shipment after shipment. You might say we like its *product integrity* . . .”

To learn more about what Ostuco tubing can do for *your* production, contact your Ohio Seamless representative, listed in the Yellow Pages, or the mill at *Shelby, Ohio — Birthplace of the Seamless Steel Tube Industry in America.*

AA-9431




## OHIO SEAMLESS TUBE DIVISION

*of Copperweld Steel Company • SHELBY, OHIO*

*Seamless and Electric Resistance Welded Steel Tubing • Fabricating and Forging*

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**For STRENGTH...get NIBROC Hi-Dry Towels**

Extra strength to stop tearing or shredding in wet hands ☐  
 Exclusive Hi-Dry fibres to soak up water faster ☐ The result:  
 Reduced waste ☐ Real savings in your annual towel costs ☐  
 Next time get Nibroc Hi-Dry Towels.

Another Quality Product of BROWN COMPANY

Mills: Berlin and Corham, N. H.  
 General Sales Office: 150 Causeway Street, Boston 14, Mass.

See "Paper Towels" in Yellow Pages, or write Dept. 00, Boston, for samples.

**SUGGESTION BOX**

**GOOD IDEA!** SEND TODAY for samples, complete information and name of nearest Nibroc dealer. Check also for a Customer Service set of 8 Washroom Posters that will help you cut towel consumption—reduce maintenance.

JUNE 22, 1959

For More Information Write No. 202 on Inquiry Card—Page 36

**BROWN COMPANY**

Towel Sales Division, Dept. NG-6, 150 Causeway St., Boston 14, Mass.

☐ Send samples and complete information ☐ Send me set of Posters

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

FIRM \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_



# AIR FREIGHT EXCLUSIVE

## **Central GHQ for cargo insures extra care for your shipment on United Air Lines**

United Air Lines' unique Denver operating base includes centralized cargo control. This permits minute-to-minute scheduling of space on the more than 900 United flights daily. There's always a "right flight" for your cargo. When you call United, you're *promised* space (Reserved Air Freight) to any of 82 cities—and on as little as three hours' notice!

### **AND MORE "EXTRAS"**

**2000-community service.** United serves more major markets than the combination of cities offered by any other line.

**Largest high-speed cargo fleet.** In addition to DC-6A Cargoliners, United passenger DC-7s and other Mainliners carry air freight.

**Door-to-door pickup and delivery** makes shipping United as effortless as dropping an Air Mail letter in the box.

**Radar on every United Mainliner®** helps guide shipments past delaying weather, helps you keep delivery promises.

### **FREE BOOKLET**

tells how United Air Lines saves shippers money, provides better service. How about you? Just write to Cargo Sales Division, United Air Lines, 36 South Wabash Ave., Chicago 3, Illinois.

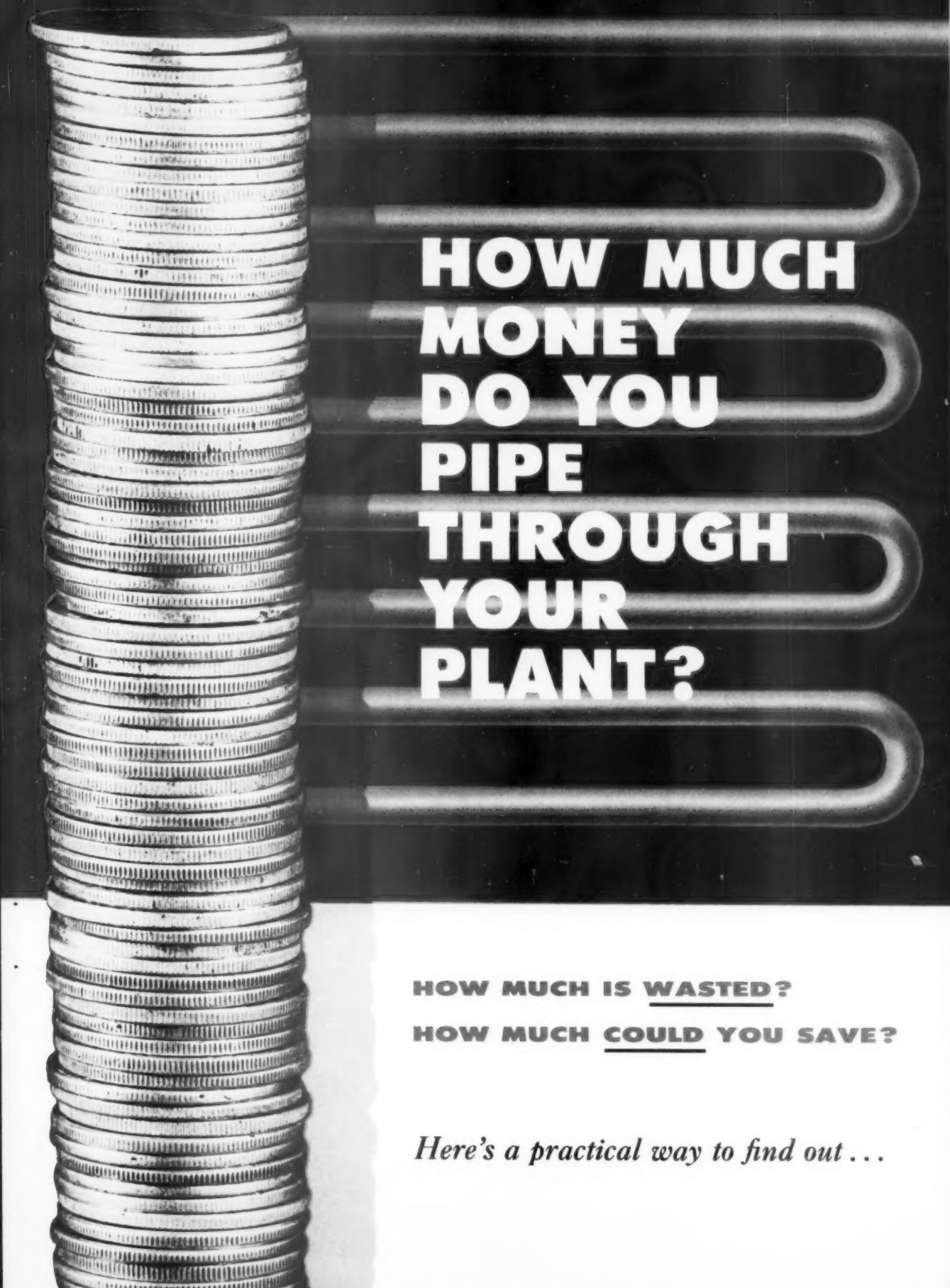


**YOU PAY NO MORE FOR EXTRA CARE WHEN YOU SHIP UNITED AIR LINES**

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For More Information Write No. 204 on Inquiry Card—Page 36→  
PURCHASING





# HOW MUCH MONEY DO YOU PIPE THROUGH YOUR PLANT?

HOW MUCH IS WASTED?

HOW MUCH COULD YOU SAVE?

*Here's a practical way to find out . . .*

# How modern measurement and control methods can help you save materials, time, and money

How long could a supermarket survive without modern cash registers and check-out methods to measure and control the flow of merchandise—the flow of money? The same sound business logic is being applied in more and more manufacturing and process plants in the competitive struggle to keep costs down and quality up.

Applying modern methods of measuring and controlling the money that flows through pipes in *your* plant (in the form of gases or liquids used as fuel, as raw materials, or as aids in manufacturing) makes sense for one basic reason: *It pays.*

"In-plant" metering, for instance, pays for itself quickly in better cost control, in maintaining quality, in replacing slow and expensive batching methods, and in providing dependable audit control records.

Gas pressure regulators are being used in hundreds of plants where they were never used

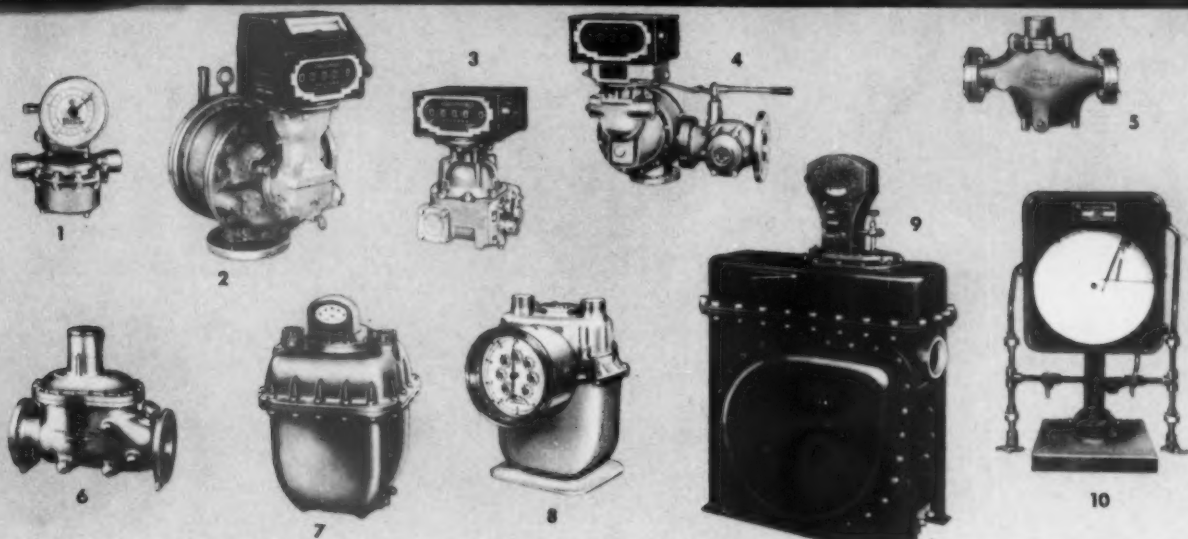
before to insure more efficient, more economical use of both natural and "bottled" gas.

Better valves and valving methods pay for themselves through reducing waste, down time, and flow contamination.

*There is hardly a plant of any kind—including yours—where the right application of the right measurement and control methods and equipment won't produce savings many times the modest cost involved.*

Certainly it's worth investigating—especially since it will cost you nothing to talk to a Rockwell Field Engineer. He represents the most complete and versatile line of measurement and control products available through any one source, and a wealth of practical know-how in modern measurement and control methods. To have a Rockwell Engineer visit you or for literature on Rockwell Meters, Valves and Regulators, send the coupon on the back page.

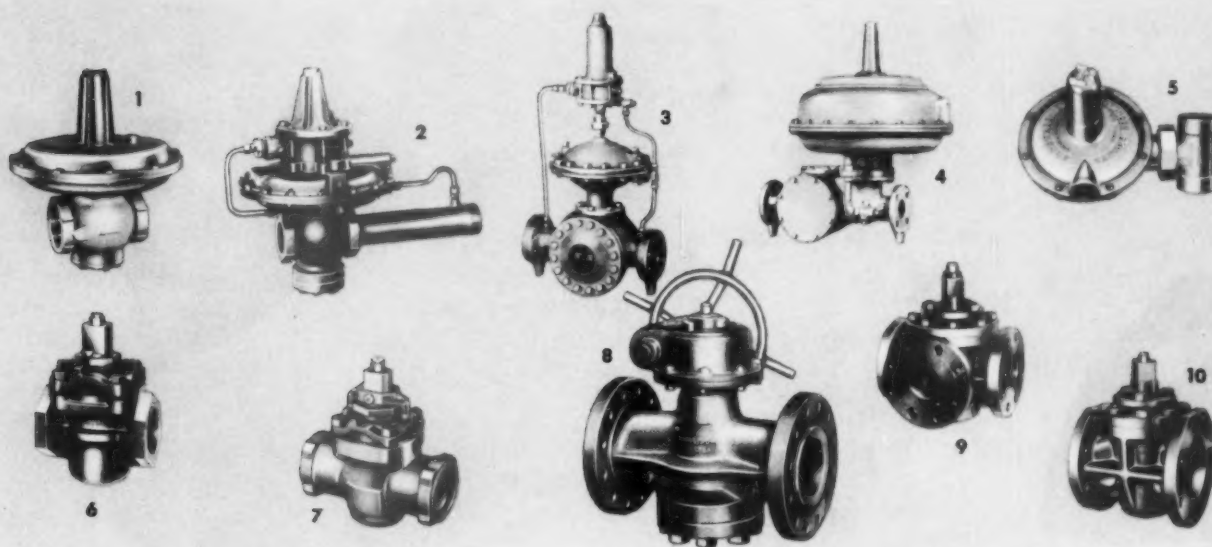
**ROCKWELL IS THE LEADING SINGLE SOURCE FOR**



**"In-Plant" Metering:** Liquid meters and gas meters are the "cash registers" of modern plants, vital in keeping costs down and quality up. Shown here are just a few of the hundreds of Rockwell liquid meters and gas meters. There is a Rockwell meter to measure accurately and economically just about anything that will flow through a pipe.

**Rockwell Liquid Meters:** (1) Oscillating piston meters . . . (2) Rotary displacement meters . . . (3) Reciprocating piston meters . . . (4) Meters with automatic quantity control valves . . . (5) Hot water meters . . . (6) Large capacity water meters.

**Gas Meters:** (7) Large capacity aluminum meters . . . (8) Consumption test meters . . . (9) Large capacity pressed steel meters . . . (10) Orifice meters.



### Controlling Piped Material:

Better control of piped material (liquids, gases, and slurries) pays for itself quickly by preventing waste, assuring better utilization, and increasing safety. Here are a few of the Rockwell-Nordstrom lubricated plug valves and Rockwell gas pressure regulators that can improve piped materials handling in hundreds of different ways.

**Rockwell Gas Pressure Regulators:** (1) Furnace and boiler regulators . . . (2) Kiln and oven control regulators . . . (3) High pressure reduction regulators . . . (4) Low pressure burner regulators . . . (5) Service regulators.

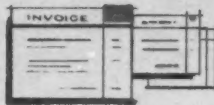
**Rockwell-Nordstrom Lubricated Plug Valves:** (6) Semi-steel valves . . . (7) Steel valves . . . (8) Hypresphere valves . . . (9) Multiport<sup>®</sup> 3- and 4-way valves . . . (10) Corrosion resisting valves in various alloys.

**MEASUREMENT AND CONTROL PRODUCTS AND IDEAS...**

# See where modern measurement and control can help you cut costs and improve production



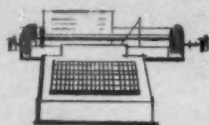
**Air Conditioning:** Rockwell-Nordstrom valves insure proper balancing on chill water lines; gas meters disclose efficient or inefficient use of fuel; regulators control economical gas flow.



**Cost and Quality Control:** Metering can often replace expensive batching methods, with worthwhile savings in time, space, and labor, and more dependable control of quality.



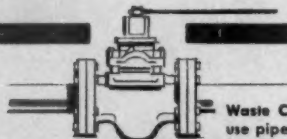
**Tax Control:** Where sewage taxes are based on water consumption, you can make substantial tax savings by metering water which does not go out through the sewage system (used in your finished product, or to water plant grounds, etc.).



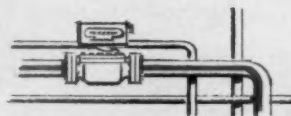
**Audit Control:** Gas and liquid meters are accounting machines for anything that flows through pipe; meter records provide accurate data for better cost and audit control.



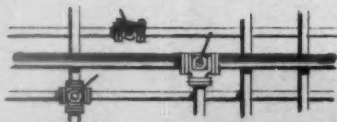
**Plant Protection:** Rockwell-Nordstrom valves and Rockwell pressure regulators are safety devices; they prevent leakage of volatiles and caustics and maintain safe pressure limits.



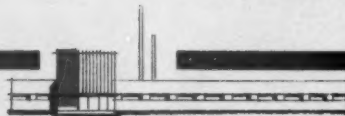
**Waste Control:** Where multiple units use piped material, individual meters pay for themselves by spotting inefficiencies. Rockwell-Nordstrom valves stop waste of volatile or hard-to-hold piped materials.



**Production Planning:** Using meters on gas and liquid lines throughout pilot plants provides invaluable information on efficiency of methods, equipment and design.



**Traffic Control:** Rockwell-Nordstrom valves (including exclusive 3-way and 4-way Multiport designs) can give you profitably flexible routing of piped materials; often making possible the use of a single piping system for several different materials.



**Plant Design:** The best way to get full advantage of the savings made possible by modern measurement and control methods is to design these methods into your new plant or plant addition. Your Rockwell Field Engineer can help you.



**MAIL THIS COUPON TODAY . . . IT COSTS NOTHING TO FIND OUT HOW MODERN MEASUREMENT AND CONTROL METHODS CAN SAVE MONEY IN YOUR PLANT**

Rockwell Manufacturing Company, Pittsburgh 8, Pa.

- ☐ Please have a Rockwell Field Engineer call me for an appointment.
- Please send literature on ☐ Controlling gas pressures; ☐ Valving gases, liquids and slurries; ☐ Measuring liquids; ☐ Measuring gases.
- I am concerned primarily with ☐ Light & Heavy Metal Fabricating ☐ Basic Chemical Production ☐ Chemical Processing ☐ Food, Drugs & Tobacco ☐ General Manufacturing Operations ☐ Petroleum Processing ☐ Others:

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**MEASUREMENT & CONTROL DEVICES**

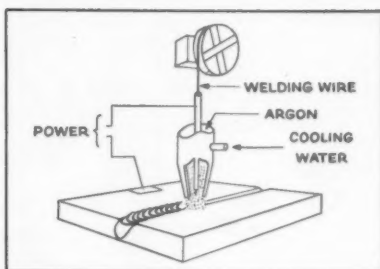
more fine products by  
**ROCKWELL**



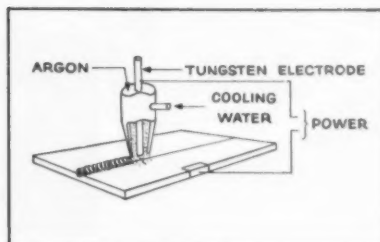


**Only LINDE...**

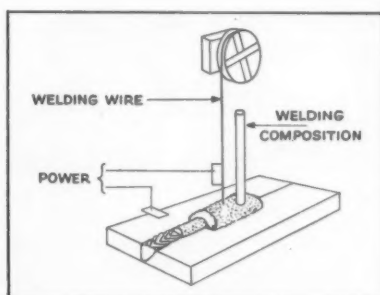
# Offers You These Four Advanced Methods for Modern Metal Fabrication



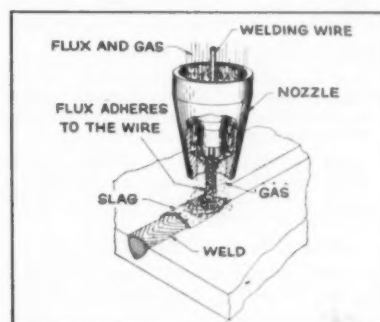
**SIGMA** Welding—Fastest growing fusion welding method . . . arc is maintained in a shield of argon gas between the consumable electrode filler metal and the workpiece. Welds nearly all commercial metals over  $\frac{1}{8}$ -in. thick manually, and down to 0.050-in. thick automatically.



**HELIARC** Welding—Makes high quality welds in *any* commercial metal. Uses a non-consumable tungsten electrode in a shield of argon gas. Filler metal may be added to the weld if needed. Since no flux is used, finishing is not necessary.



**UNIONMELT** Welding—The submerged arc process for welding heavy-duty parts such as pipe, pressure vessels, ships, railroad and industrial equipment. Also used in surfacing for corrosion and wear resistance, and resurfacing for repair.



**UNIONARC** Welding—Uses new concept of magnetically coating wire with flux at the torch nozzle. Makes high-quality welds in all positions. Also used effectively to repair defects developed during casting or riser-removal on heavy carbon steel castings.

For information or help with any welding problem or to receive LINDE's bi-monthly "Metalworking Bulletin", write Dept. PC-64, Linde Company, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N.Y. In Canada: Linde Company, Division of Union Carbide Canada Limited.

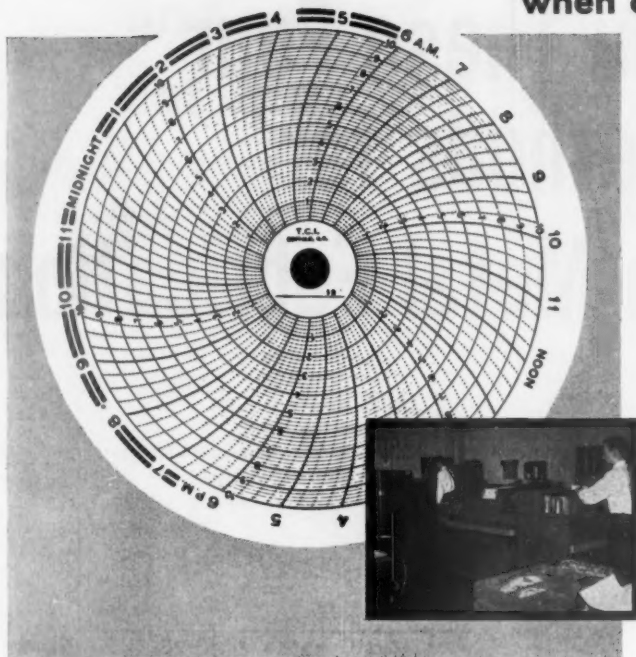
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*Linde*



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new ways to cut costs . . . save time  
when ordering CHARTS and FORMS



### a new TECHNICAL service

Here is a new analytical service which has helped many to reduce recording chart purchasing costs by an average of 20% to 25%.

Technical's "Data Processing Center" is now available to help you analyze your complete chart purchases. By so doing, you will be able to adjust your purchases to a more regular basis, eliminating unnecessary orders and waste motion.

One firm that used this service found they had placed 58 orders during the year for only \$230 worth of charts. By analyzing their needs, purchase orders were cut to 10 per year.

After Technical's analysis, another firm using over 2,000 strip charts during the year issued a blanket order for their annual needs to be shipped at specified intervals.

This is a service of Technical Sales Corporation to help you reduce costs. Technical helps you save in another important way, too, — by making available all the charts you need from one source. Write for further information.

## TECHNICAL SALES CORPORATION

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Representatives for  
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### CLARKSON imprinted stock tabulating forms

shipped  
**in 72**  
hours (or less)

When you need forms fast . . . call for Clarkson's "Xpress Imprint" service! Your imprinted forms will be on the way in 72 hours from the receipt of your order

A wide variety of stock forms are available. Call your Clarkson distributor or write for name of the nearest.

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IT'S FREE!**



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**Look for the "QP"  
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It is your assurance  
of quality equipment.**

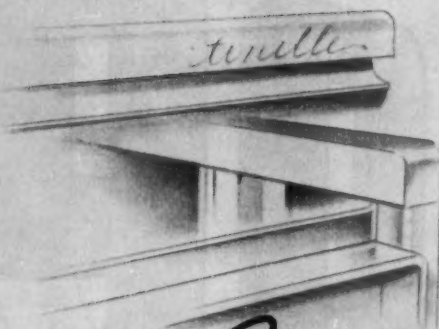
*See your Lyon Dealer  
for prompt delivery of  
the world's most diversified  
line of steel equipment*

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General Offices: 63 Monroe Ave., Aurora, Illinois  
Factories in Aurora, Illinois and York, Pa.  
Dealers and Branches in all Principal Cities



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JUNE 22, 1959

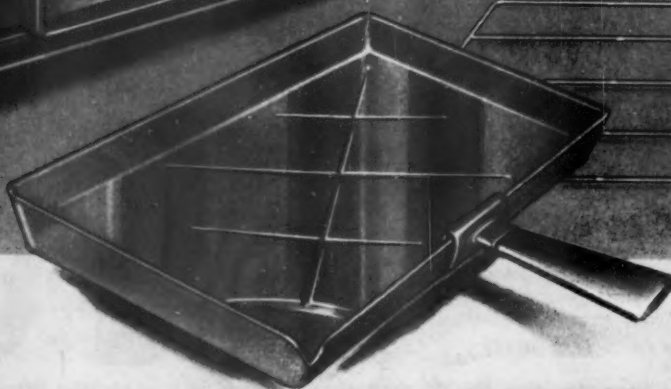
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One of America's best known and most successful designers, Russel Wright, is practically a household word to Mrs. America. He, more than any other one man, has brought practical design to the average American housewife. Mr. Wright believes "good design" should be universal and his general aim is to create the widest variety of products for the widest possible market at the lowest possible cost so that "good design" can reach everyone.



*Russel Wright* **designs with.**







# ...SHARONART\*

The portable broiler is high on the list of appliances most wanted by the modern American housewife. Until recently, little attention was paid to its design. The unwieldy bulk and lackluster styling of most models contrasted with the functional beauty of today's colorful kitchens and kitchen tools.

Russel Wright, world famed designer, has applied his talents to this appliance and has created a broiler with the attractive tailored look designed to harmonize with modern day kitchens.

In place of the outmoded polished chromium cover, Mr. Wright has utilized Sharon Steel's exciting new Sharonart\* stainless in combination with a main shell of colored baked enamel over textured Sharonart\*. Russel Wright has replaced impractical broiler operation with simple, functional, press-down levers that automatically set the thermostat and timer, and has included a stainless steel well-and-tree tray designed to be carried to the dining table and generous bakelite handles for safe carrying of the unit.

Whether you make broilers—or any other appliance—it's certain Sharonart\* will give your product the same fresh look Russel Wright has achieved in this broiler design. *The Sharon Steel Corporation, Sharon, Pa.*

47. M.

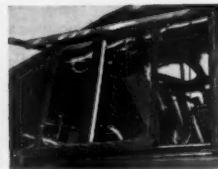
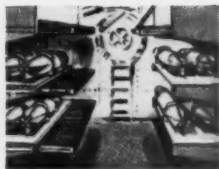
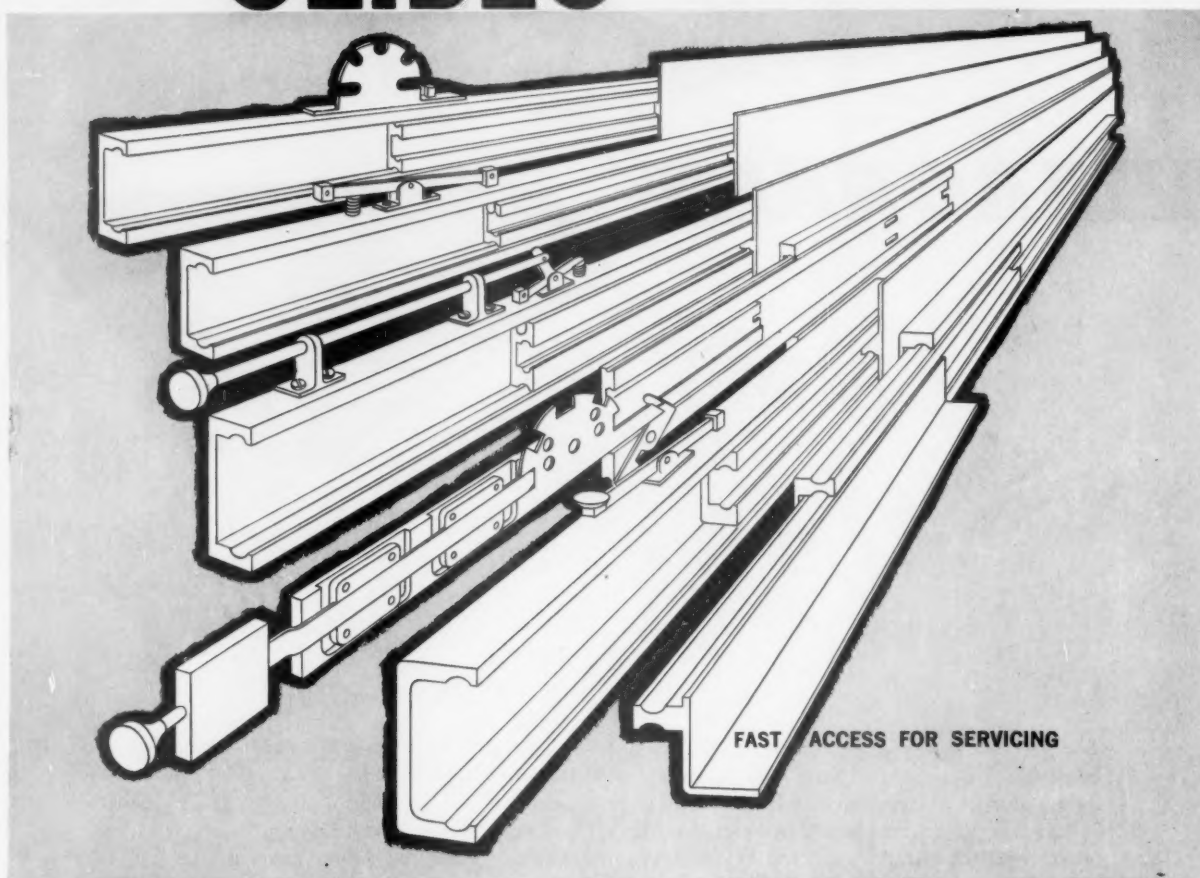


SHARONSTEEL

**SHARON** *Quality* **STEEL**

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more to choose from  
means you're certain  
to choose correctly



Grant slides are applicable to every type of industry.

*The nation's first and leading manufacturer of slides*

## **GRANT INDUSTRIAL SLIDES**



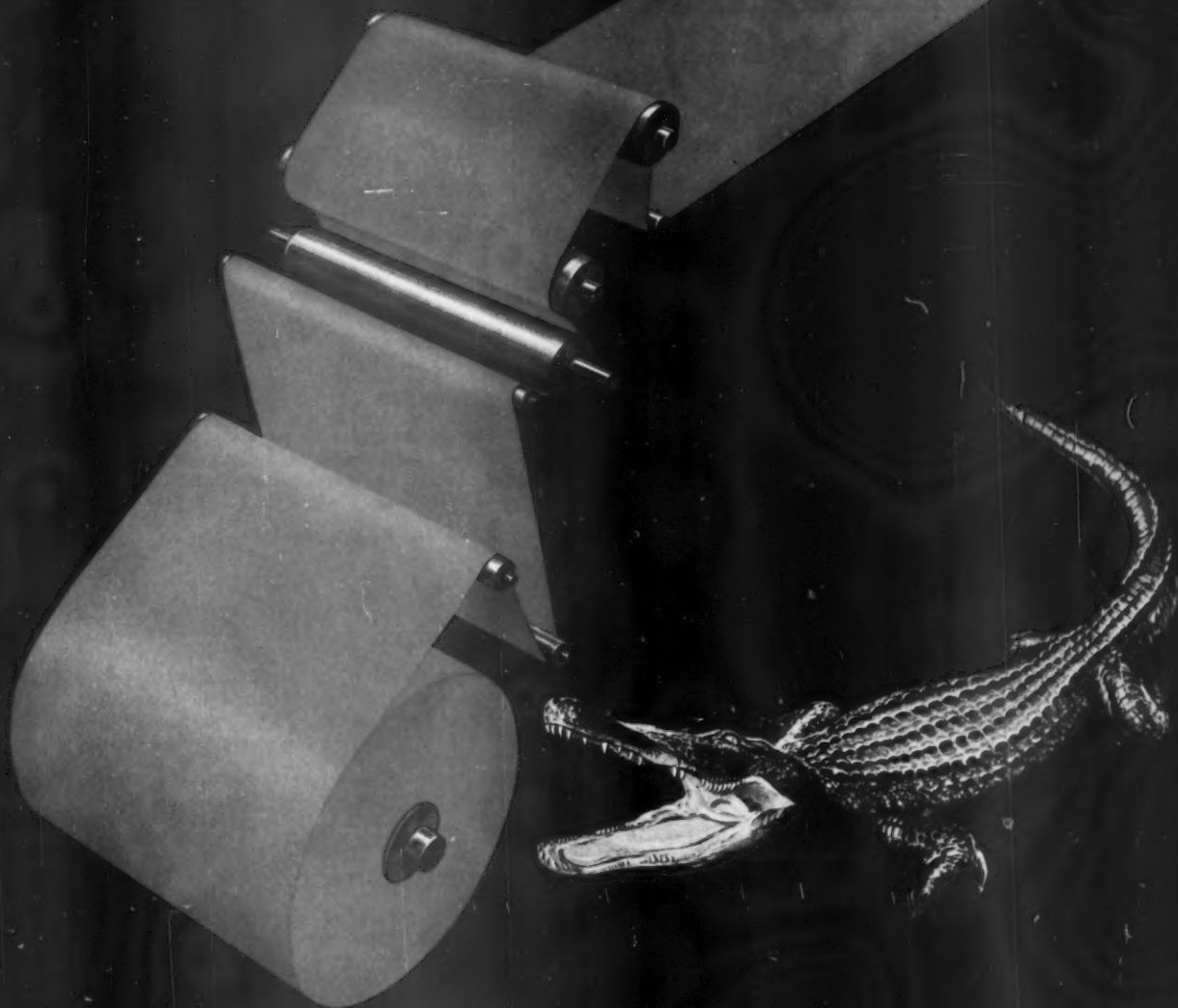
GRANT PULLEY AND HARDWARE CORPORATION

109 High Street, West Nyack, New York  
944 Long Beach Avenue, Los Angeles 21, Cal.

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## AUTOMATIC WRAPPING



## What makes **GATOR HIDE**® the world's most widely used wrapping paper?

**T**wo factors explain Gator Hide's long-standing popularity for automatic machine wrapping—1. full yardage and 2. consistent high quality.

This wrapping paper always measures up to specification. There's no waste. And you can always *depend* on it.

Gator Hide kraft is made from 100% virgin sulphate pulp. It's tough. Rugged. Built to take

the tensions of high-speed automatic wrapping.

Leading paper merchants throughout the country stock Gator Hide kraft, and together with International Paper's own specialists, stand ready to help solve your every wrapping problem without obligation.

It pays to standardize on Gator Hide kraft from International Paper—*"Your most dependable source of supply."*



Southern Kraft Division **INTERNATIONAL PAPER** New York 17, N.Y.

# Information For Your Catalog Files

## AIR MOTORS

Bulletin 215 describes a new air motor line. The eight-page illustrated catalog covers features, specifications, and dimensions for the five bore sizes available in each of four mounting styles. A special section shows accessories.

**Hannifin Company**

Write No. 1 on Inquiry Card—Page 36

## BLIND RIVETS

Form 8-409 describes pull-thru and self-plugging blind rivets. The eight-page two-color brochure includes technical information, applications, and installation sequences. Dimensional drawings are presented and grip ranges for the full line are tabulated.

**Huck Manufacturing Company**

Write No. 2 on Inquiry Card—Page 36

## CHAIN

Bulletin 59 lists most sizes of 17 types of welded and weldless chain. The 28-page catalog has illustrations, recommended uses, and working load limits. Trade numbers, weight per 100 feet, and number of links per foot are also presented.

**S. G. Taylor Chain Co., Inc.**

Write No. 3 on Inquiry Card—Page 36

## CUTTING OILS

A pamphlet entitled "Pour savings into your shop with Gulfcut Oils." Ten different types of cutting oils are described.

**Gulf Oil Corporation**

Write No. 4 on Inquiry Card—Page 36

## GAGES

Data Unit #351 describes non-frosting liquid level gages. Has information on construction, design features, and specifications.

**Jerguson Gage & Valve Company**

Write No. 5 on Inquiry Card—Page 36

## LIFTING MAGNETS

A 12-page two-color catalog on lifting magnets. Bulletin 1300 covers both all-welded and bolted types. Provides operating data and lifting capacities for magnets ranging up to 80-inch diameters.

**Electric Controller & Mfg. Co.**

Write No. 6 on Inquiry Card—Page 36

## MACHINISTS' TOOLS

Catalog No. 37M describes machinists' tools. The 48-page booklet covers the tools generally used by machinists and toolmakers.

**Brown & Sharpe Mfg. Co.**

Write No. 7 on Inquiry Card—Page 36

## METAL SPINNING

A 12-page bulletin describing metal spinning and hydroforming. Lists savings on tooling costs for short runs, odd shapes, and experimental work.

**J. Schrader Co.**

Write No. 8 on Inquiry Card—Page 36

## METAL STAMPING

A catalog on metal stampings and wire forms. Sketches and plan drawings illustrate lugs, clips, terminals, and other parts.

**Zierick Manufacturing Corporation**

Write No. 9 on Inquiry Card—Page 36

## TEMPERATURE CONTROLS

An eight-page catalog of temperature controls and allied equipment. The two-color bulletin contains charts, specifications, and photographs.

**Parflow Corporation**

Write No. 10 on Inquiry Card—Page 36

## WELDING FITTINGS

Booklet FB-78 is a guide to the selection of carbon, alloy, and stainless steel seamless welding fittings and flanges. The 12-page catalog covers specifications, analyses, and mechanical properties.

**Babcock & Wilcox Company**

Write No. 11 on Inquiry Card—Page 36

## WIRE ROPE

A complete reference guide on the care and use of wire rope and slings, this manual is in handbook size and tab indexed for quick reference. There are sections devoted to strengths and weights.

**Macwhythe Co.**

Write No. 12 on Inquiry Card—Page 36





## POSITIVE DUPLICATION — EVERY TIME!



**(PD)** ° Distinctive bullet markings occur every time a bullet leaves the same gun barrel. The barrel rifling grooves the slug, making possible *positive identification*—an important contribution to the science of ballistics.

### WHEELS MATCHED TO MACHINE

Just as a bullet is matched to a gun barrel, so CINCINNATI **(PD)** CENTERLESS WHEELS (like those shown above) are matched to your centerless grinding jobs. Thirty-five years of centerless grinding experience back up each application of CINCINNATI **(PD)** WHEELS to your operation.



### PRECISION PERFORMANCE

And every time—time after time—when you reorder a CINCINNATI **(PD)** WHEEL, it will act and grind exactly like the original. The Positive Duplication of wheel grades by the remarkable **(PD)** manufacturing process will help maintain your production—and save you both time and money.

° Trade Mark Reg. U. S. Pat. Off.

Whatever CINCINNATI **(PD)** WHEEL you specify . . . centertype, centerless, internal, surface, toolroom, or snagging wheel . . . you get Positive Duplication—every time!

### APPLICATION BY SPECIALISTS

Here's another advantage for you. Each one of our factory representatives is a highly trained and experienced specialist in grinding machine set-ups and operations. For his help on those extra-tough grinding problems, call your CINCINNATI **(PD)** GRINDING WHEEL distributor, or contact Cincinnati Milling Products Division, Cincinnati 9, Ohio.



A PRODUCTION-PROVED PRODUCT OF THE CINCINNATI MILLING MACHINE CO.

For More Information Write No. 160 on Inquiry Card—Page 36

*This can't be FIREBAN...*



## **New Taylor FIREBAN 321 Laminated Plastic is self-extinguishing in only 3 seconds**

Electrical faults in appliances, TV sets, radios, motors and other electrical devices frequently lead to fires—and these fires lead to complete destruction of the equipment, sometimes extensive damage to the facilities surrounding it. Taylor FIREBAN 321 is designed to retard fire. Self-extinguishing in only 3 seconds—it is an effective barrier against the spread of flame. In addition, this flame-retardant laminated plastic has excellent moisture resistance, excellent electrical resistance after exposure to high humidity, and good mechanical properties; also offers low dielectric losses. These properties help prevent the electrical faults that lead to fires. Write TAYLOR FIBRE CO., Norristown 36, Pa., for complete details.

# **Taylor**

**LAMINATED PLASTICS VULCANIZED FIBRE**  
For More Information Write No. 161 on Inquiry Card—Page 36

## **Catalog Files**

### **MOTORS**

A wide range of fractional horsepower geared motors, turntables, transmissions, and cup dispensers are illustrated and described. Complete specifications and dimensional drawings are featured.

**Merkle-Korff Gear Company**

Write No. 13 on Inquiry Card—Page 36

### **PUMPS**

A 72-page two-color catalog on centrifugal and rotary pumps. Included are descriptions and specifications of pump parts and accessories.

**Detroit Harvester Company**

Write No. 14 on Inquiry Card—Page 36

### **ROLLING DOORS**

A 36-page catalog on steel rolling doors. The two-color bulletin is illustrated with photographs, drawings, and charts.

**Kinnear Manufacturing Company**

Write No. 15 on Inquiry Card—Page 36

### **STARTERS**

Bulletin 8130 lists a line of high-voltage starters. The eight-page two-color catalog covers starters for squirrel cage, wound rotor, and synchronous motors. Describes the various types of enclosures available.

**Electric Controller & Mfg. Co.**

Write No. 16 on Inquiry Card—Page 36

### **LUBRICATION**

A "report to management" describing dollar savings in plant operations through modern lubrication methods. This 16-page two-color bulletin features case histories of the advantages of automatic lubrication systems. Includes photographs, drawings, and operating characteristics.

**Lincoln Engineering Company**

Write No. 17 on Inquiry Card—Page 36

For More Information Write No. 162  
on Inquiry Card—Page 36→

**PURCHASING**

# NEW

**Cross-Knit, a wonder soft,  
super absorbent towel, and a  
good-will builder in the washroom**



*"Little things affect peoples'  
attitude toward you"*

© Fort Howard Paper Company



## **Fort Howard Paper Company**

*Green Bay, Wisconsin*

*America's most complete line of paper towels, tissues and napkins*





*...then our P. A.  
suggested making them  
with Bostitch staples!*



Increases in production and profits come hand in hand when you fasten with Bostitch stapling. A Bostitch Economy Man may be able to demonstrate this to you with your company's products. Showing how to make things better and faster for less money is his job.

There's a correct combination of Bostitch staplers and staples to more profitably fasten almost everything . . . fabrics, leather, wood, plastics and even light

metals. Operators need no special training. Stapling is clean, neat and accurate.

Stapling frequently costs less than riveting, spot welding, nailing, tying or gluing. Let one of the 350 Bostitch Economy Men who work out of 123 U.S. and Canadian cities give you the facts on stapling for your production fastening. He's listed under "Bostitch" in your phone book.

***Fasten it better and faster with***

**BOSTITCH®**  
STAPLERS AND STAPLES

726 BRIGGS DRIVE, EAST GREENWICH, RHODE ISLAND

For More Information Write No. 163 on Inquiry Card—Page 36





*The smoother surface of*  
**CONTOUR-WELDED\***  
**STAINLESS TUBING**  
*gives it greater resistance to corrosion*

Recent tests prove: (1) Contour-welded tubing is smoother than any other tubing, and (2) this extra smoothness provides greater resistance to corrosion.

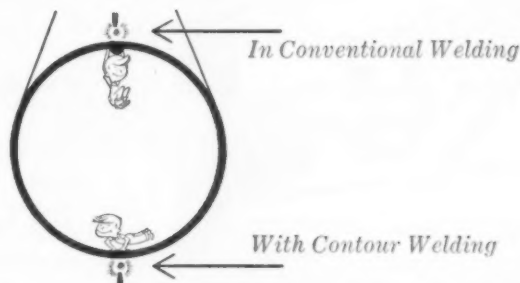
Here's how TRENTWELD® tubing, made by the exclusive Contour-Weld process, compares with other full-finished tubing:

- It's smoother than seamless because it's formed from uniformly rolled strip steel, whereas seamless is extruded from a billet.
- It's smoother than other welded tubing because the Contour-Weld process, patented by Trent, virtually eliminates the weld bead.

Other tests prove this smoother surface provides *increased resistance to corrosion* — because there are fewer focal points for corrosive attack. Not only that, the smoother surface ensures *longer fatigue life* and *less product incrustation*.

But get full details. Our free 48-page "Trentweld Manual" gives complete data on Contour-Welded tubing in sizes from 1/8" to 40" O.D., in stainless and high alloy steels, titanium, zirconium, zircalloy and Hastelloy.† Write: Trent Tube Company, Box 2518, Pittsburgh, Pa.

†Trademark Haynes Stellite Co.



In CONVENTIONAL WELDING of tubes, gravity pulls the molten metal down to form a bead that is difficult to remove by cold working. And cold working may lead to undercuts, focal points for fatigue cracks and corrosive attacks. Cleaning becomes difficult.

\*With CONTOUR-WELDING the tube is welded at the bottom. Gravity still pulls the molten metal down inside the tube, but now the weld area corresponds to the contour of the tube. There's virtually no weld bulge on the inside surface. And even on the O.D., the weld seam more closely conforms to the contour of the tubing.



*stainless and high alloy pipe and tubing*  
**TRENT TUBE COMPANY**

Subsidiary of Crucible Steel Company of America • GENERAL OFFICES: East Troy, Wisc. • MILLS: East Troy, Wisc.; Fullerton, Calif.

For More Information Write No. 164 on Inquiry Card—Page 36

For information on  
conditions, trends and  
markets in the  
chemical industry,  
see the men from  
**OLIN MATHIESON**



**MATHIESON INDUSTRIAL:** Ammonia • Bicarbonate of Soda • Carbon Dioxide • Caustic Soda • Chlorine • Formaldehyde • Hydrazine and Derivatives • Hypochlorite Products • Methanol • Muriatic Acid • Nitrate of Soda • Nitric Acid • Soda Ash • Sodium Chlorite Products • Sodium Methylate • Sulfate of Alumina • Sulfur (Processed) • Sulfuric Acid • Urea

**BLOCKSON:** Trisodium Phosphate • Trisodium Phosphate Chlorinated • Sodium Tripolyphosphate • Tetrasodium Pyrophosphate • Sodium Hexametaphosphate • Monosodium Phosphate • Disodium Phosphate • Sodium Acid Pyrophosphate • Tetrapotassium Pyrophosphate • Sulfuric Acid • Hydrofluoric Acid • Sodium Silicofluoride • Sodium Fluoride • Teox® 120 Surfactant • C-29 Sequestering Agent

**MATHIESON ORGANICS:** Ethylene Oxide • Ethylene Glycol • Diethylene Glycol • Triethylene Glycol • Polyethylene Glycols (Poly-G's®) • Monoethanolamine • Diethanolamine • Triethanolamine • Glycol Ethers (Poly-Solv's®) • Surfactants (Poly-Tergents®) • Ethylene Dichloride • Dichloroethylene

6579-A

**OLIN MATHIESON CHEMICAL CORPORATION**  
CHEMICALS DIVISION • BALTIMORE 3, MD.  
For More Information Write No. 165  
on Inquiry Card—Page 36

## Letters To The Editor

### EDITORIAL INDEX

Dear Sir:

I have just received my copy of the editorial index from *PURCHASING* Magazine. Frankly, I think this is a grand idea that will serve a very useful purpose. Thanks for your continued cooperation.

E. F. Andrews

Assistant to the Vice President  
Allegheny Ludlum Steel Corp.  
Pittsburgh 22, Penna.

• Single copies of the 1958 editorial index are available without charge. Write: Editorial Department, *Purchasing Magazine*, 205 East 42nd Street, New York 17, N. Y.

### VENDOR ANALYSIS FORM

Dear Sir:

In your May 11 issue, I particularly liked the article, "Purchasing at Dow Chemical's Texas Division." I am especially interested in the supplier data form shown on page 73. Do you have a list of other concerns that also use such a form or system?

I would like to get several blank forms used by different purchasing departments as a guide in setting up a system in our own purchasing department.

J. E. Fitzgerald

Buyer

Corning Glass Works  
Corning, New York

• Besides Dow, we have seen such forms in use at the following purchasing departments: Bendix Aviation, Kansas City, K. A. Cruise, Materials Manager; Thompson Products, Cleveland; Glenn Hackett, Director of Purchases; Northrop Aircraft, El Segundo, Calif.; A. G. Pearson; St. Regis Paper, New York, Jack

Hartung, Director of Purchases. If other readers are also interested in securing copies we suggest you write directly to one of the above. We are sure that they will be pleased to cooperate with you.

### RECEIVING DEPARTMENT PROCEDURE

Dear Sir:

Please send information in regard to how goods, merchandise, raw materials and supplies should be processed through the receiving department.

Should these purchases be physically counted, weighed, checked, etc.? Or is it satisfactory to rely on the shipper's figures for this information?

B. H. Bredeson

Purchasing Agent

National Rivet & Mfg. Co.  
Waupun, Wisc.

• Most receiving departments carefully recheck the supplier's figures on his invoice or bill of lading. In addition, they make certain that the material is the same as that which was ordered.

After this, the receiving department usually sends a report indicating that the amount on the order checks with the amount actually received. When there is a discrepancy, it is up to the purchasing department to reconcile the difference.

Normally, copies of the receiving report go to either accounts payable or to the purchasing department. In either case, the receiving report is checked against the invoice and the original purchase order to make certain that all quantities, prices agree. Again, if they don't agree, it is the responsibility of the buyer to get in touch with the supplier to straighten things out.

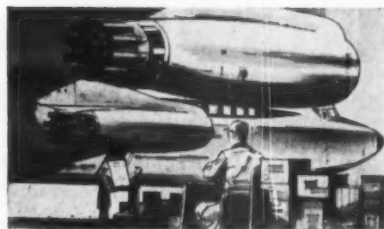


Ship Coast to Coast on the  
**WORLD'S FASTEST JETLINER!**

## ***TWA BOEING 707***

The magnificent **TWA BOEING 707** is the fastest airliner in the world...designed to bring you the wonders of pure-jet freight service. And at no increase in rates!

Your consignment travels half a mile every three seconds coast to coast. You can ship bigger, heavier orders. Send more to more customers on a single Jet flight. And the **TWA BOEING 707's** advanced new electronic system assures proper climatic conditions for perishable shipments!

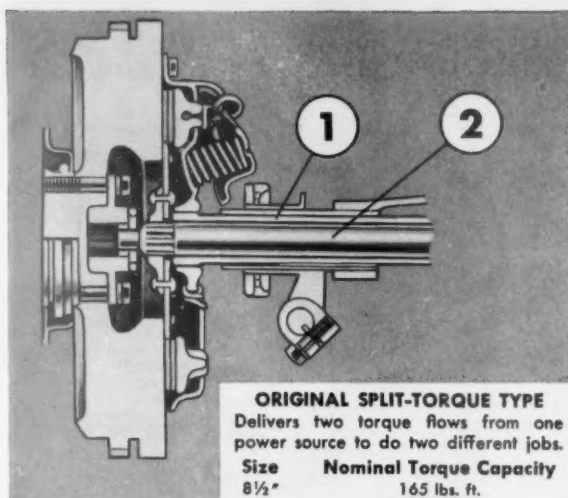


**USE TWA JET FREIGHT**  
**coast to coast**

Call your Freight Forwarder or your nearest TWA  
Air Freight office today.

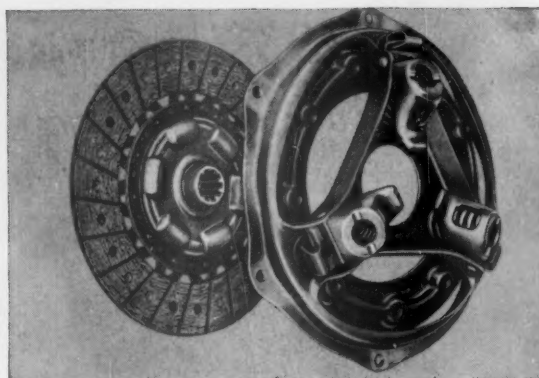
**SHIP THE FASTEST WAY...SHIP** ***TWA*** **BOEING 707**

For More Information Write No. 166 on Inquiry Card—Page 36



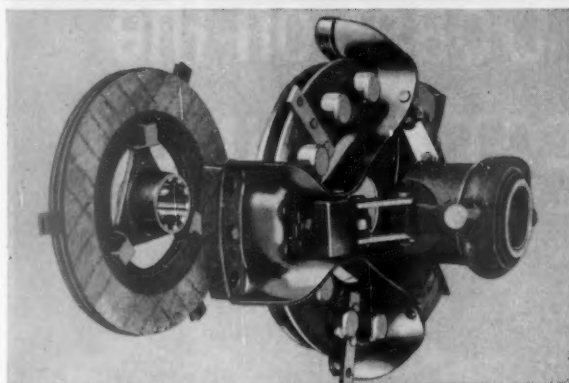
**ORIGINAL SPLIT-TORQUE TYPE**  
Delivers two torque flows from one power source to do two different jobs.

Size	Nominal Torque Capacity
8½"	165 lbs. ft.
9¼"	230 lbs. ft.
10"	280 lbs. ft.
11"	320 lbs. ft.



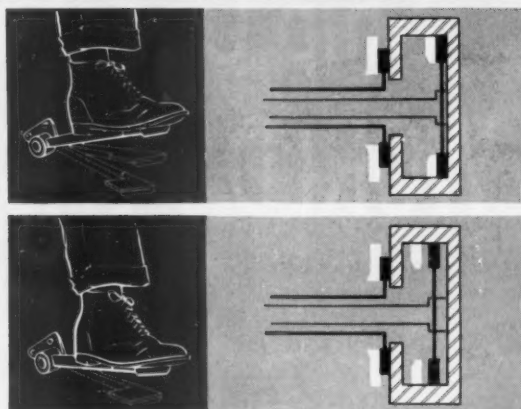
**SPRING LOADED TYPE WITH DAMPER DISC**  
For smooth drive on tractors and self propelled implements.

Size	Nominal Torque Capacity	Size	Nominal Torque Capacity
6½"	80 lbs. ft.	9¼"	230 lbs. ft.
8"	140 lbs. ft.	10"	280 lbs. ft.
8½"	165 lbs. ft.	11"	320 lbs. ft.
9"	200 lbs. ft.		



**CONSTANT PRESSURE TYPE**  
For live PTO in tractors and other heavy duty applications.

Size	Nominal Torque Capacity	Size	Nominal Torque Capacity
6½"	93 lbs. ft.	15"	800 lbs. ft.
9"	115 lbs. ft.	17"	1420 lbs. ft.
14"	720 lbs. ft.		



**DUAL DRIVE TYPE**  
Supplies selective drive to both tractor and machines with single pedal control.

Size	Nominal Torque Capacity
9"/11"	152/202 lbs. ft.
10"/12"	261/306 lbs. ft.

## 4 TYPES OF SPICER CLUTCHES

### For All Types Of Agricultural Drives

It's a lot simpler to call on Spicer when you need a clutch! You specify the capacity or select the type and Spicer has it . . . in a well-rounded line that fits your every need.

Write now for complete information on all 4 types of Spicer agricultural clutches. Or call the Dana engineer for expert assistance on all your clutch and accessory drive problems.



**DANA CORPORATION • Toledo 1, Ohio**

**SPICER PRODUCTS:** Transmissions • Universal Joints • Propeller Shafts • Axles • Torque Converters • Gear Boxes • Power Take-Offs • Power Take-Off Joints • Rail Car Drives • Railway Generator Drives • Stampings • Spicer and Auburn Clutches • Parish Frames • Spicer Frames

For More Information Write No. 167 on Inquiry Card—Page 36



# ALL-NEW ALEMITE "77" LUBRICANT PUMP

# packs most power

## FOR HIGHEST PERFORMANCE!

**68% More Powerful** . . . outperforms any other air-operated lubricant pump of its class on the market today! The all-new 5.2 horsepower Alemite "77" Pump assures smoothest, fastest delivery of all lubricants, through longest lines!

**Three Master Pressure Ratios** for unequalled delivery of all lubricants — fluid, semi-solid and heavy fibrous types. Lightweight, rust-proof aluminum construction.

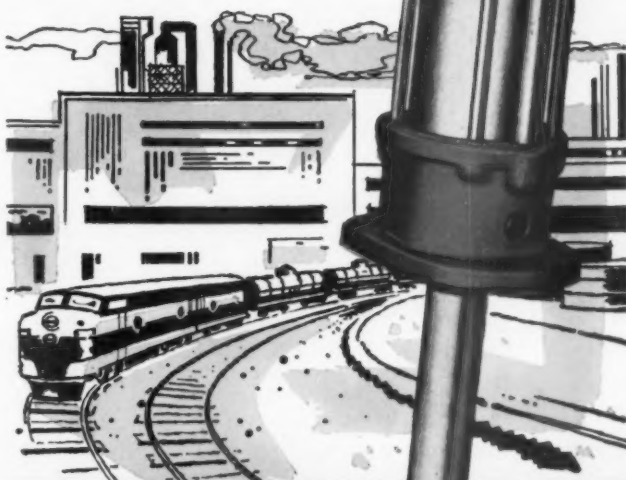
**Precision Engineered** from finest quality materials—designed for outstanding ease of operation and maximum performance. Models for 120-lb. or 400-lb. drums — for all industrial applications.

### All-New Alemite "77" Features!

- **Volume Air Distributing Valve**—self-seating, self-cleaning, volume porting
- **Modern-Design, Highly Efficient Toggle Trip Mechanism** provides balanced pressure on shuttle . . . won't bind
- **Straight-Line Exhaust** has extra-large port for highest pump efficiency
- **Hardened Steel Piston and Cylinder**, lapped to a precision fit of 125 millionths of an inch
- **All-Steel Primer Valve**, ground to a perfect seal . . . hardened for abrasion resistance
- **Dynamic Primer** assures priming and pumping of heaviest lubricants.



Dept. Z-69 1850 Diversey Parkway, Chicago 14, Illinois



### THREE POWERFUL "77" MODELS

- **High-pressure** (40 to 1 ratio) for light-bodied and fibrous greases. Delivery on both up and down stroke.

- **Medium-pressure** (25 to 1 ratio) for heavyweight oils and light-bodied greases. Delivery on both up and down strokes.

- **Volume delivery** (6 to 1 ratio) for light-bodied fluid lubricants. Single-acting pump mechanism.



Write for New Alemite "77" Pump Catalog!

You'll  
**"Count your Blessings"**  
 in increased profits and production

when you count on Veeder-Root



Veeder-Root Counters on all production machines and processes will help you to:

Keep closer *Control* of manufacturing  
 Coordinate output of parts and components

Keep up to delivery dates

Keep closer *Control* of wage and incentive payments, piece work and payrolls

Avoid costly errors, waste, shortages

Anticipate maintenance needs

Veeder-Root makes all types of counters . . . manual, mechanical, electro-magnetic, electronic . . . to count anything at any speed. What do you need to count? We'll figure the way to do it.

You always "Know the score" when you count on Veeder-Root!



**PANEL-MOUNTED  
 ELECTRICAL COUNTER**

Widely used for remote indication . . . can be grouped on panels in office. Speeds up to 1,000 counts per minute. Knob or lock-key reset. 6 figures. Also, base-mounted if desired.

Everyone can Count on

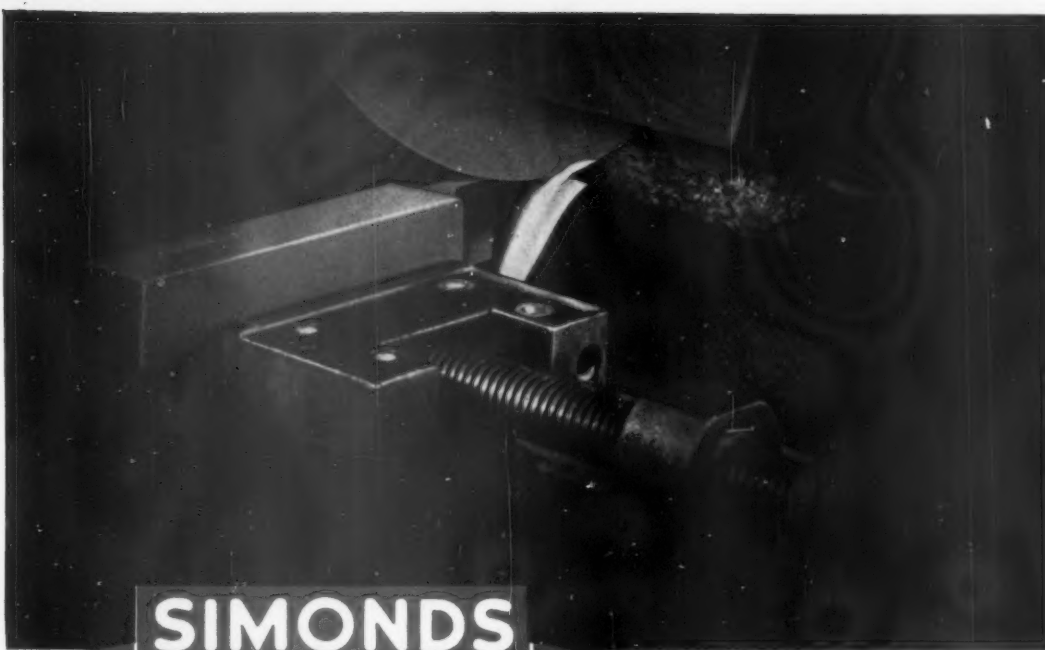


**Veeder-Root INC.**

HARTFORD 2, CONNECTICUT

Hartford, Conn. • Greenville, S. C. • Altoona, Pa. • Chicago  
 New York • Los Angeles • San Francisco • Montreal  
 Offices and Agents in Principal Cities

For More Information Write No. 169 on Inquiry Card—Page 36



**SIMONDS**  
ABRASIVE CO.

# DIAMOND WHEELS

**Finest Quality for Carbide Tool Grinding**

**MAN-MADE OR NATURAL DIAMONDS**

Precision made for best grinding performance . . . a product of the most modern manufacturing using latest techniques and most accurate equipment and tools, including air gauges. Highest mechanical accuracy, closest tolerances and balance for best running truth. Three-stage curing process assures closest duplication. Exact and true concentrations.

Man-made or natural diamonds in resinoid and vitrified bonds — metal bond in natural diamonds. Up to 35% improved grinding ratios regularly obtained with man-made diamonds on many applications.

Send for new, complete 48-page catalog with consumer net prices for all sizes, shapes, concentrations and diamond depths, form ESA 290.

*"How Good Are Man-Made Diamonds?"*

Write us for technical article reprinted from *Grinding & Finishing*.



**CALL YOUR SIMONDS DISTRIBUTOR**

**Proven products**

**Dependable know-how**

**Quick supply**

**SIMONDS ABRASIVE COMPANY**

Tacony & Fraley Sts. • Philadelphia 37, Pa.

Division of Simonds Saw and Steel Co.

BRANCHES: CHICAGO • DETROIT • LOS ANGELES • PHILADELPHIA • PORTLAND, ORE. • SAN FRANCISCO • SHREVEPORT  
IN CANADA: SIMONDS CANADA SAW CO., LTD., GRINDING WHEELS DIVISION, BROCKVILLE, ONTARIO



For More Information Write No. 170 on Inquiry Card—Page 36

JUNE 22, 1959

55



*Many steel suppliers  
make routine calls  
.....*



*Be sure you choose  
the supplier who  
makes personalized  
service calls  
.....*

He's easy to find. He's the one supplier who offers you fast, flexible district office service. He's the salesman from Granite City Steel Company.

To provide customers with steel-buying help in a hurry, Granite City Steel maintains eight sales offices in Middle America. When you need a question answered, a problem solved, our salesman is your *direct* link with the Mill.

He's cooperative. He knows steelmaking. He's familiar with your products and production problems. Most important, he knows that customers in Middle America come first . . . and that means *you!*

At Granite City Steel, we believe that quality service is just as important as quality steel. May we prove it to you?

**GRANITE CITY STEEL**

STEELMAKERS TO MIDDLE AMERICA

Ingots, Slabs and Plates • Hot and Cold Rolled Sheets • Porcelain Enameling Sheets  
Electrical Sheets • Electrolytic Tin Plate • "Strongbarn" and Industrial High-Tensile  
Galvanized Corrugated Steel Roofing and Siding • Galvanized Culvert Sheets • Galva-  
nized Flat Sheets. HOME OFFICE: Granite City, Ill. SALES OFFICES: Dallas • Memphis • Kansas  
City • St. Louis • Minneapolis • Houston • Moline • Tulsa



For More Information Write No. 171 on Inquiry Card—Page 36



## Purchasing People In The News

**Gifford-Wood Company, Hudson, N. Y.**, has announced the election of **Gerard F. Hart** as secretary of the company. Mr. Hart joined the



**Gerard F. Hart**

Company in 1946 as traffic manager. He was promoted to director of purchases in 1950. Mr. Hart is a member of the Purchasing Agents Association of Eastern New York and of the National Association of Purchasing Agents.

**Crane Co., Chicago, Ill.**, has consolidated its sales and purchasing divisions as part of a continuing program aimed at increasing operational and organizational efficiency.

A substantial part of the company's sales presently involves the merchandising of products made by other manufacturers, **N. E. Stearns**, president of the company points out. He added that since sales and purchasing are so closely related in the company it is advantageous to combine the two functions.

The consolidated divisions will be headed by **George F. Burley**, newly elected vice president for marketing and procurement. He has been vice president for purchasing and traffic since 1957. **William O. Brown**, vice president for sales since last May, has been elected vice president for trade relations. He will have national responsibility for relations with major Crane customers. Also announced were the appointments

of **William B. Gilmour** as director of marketing; **George W. Dornody**, director of procurement, and **D. R. Nordwall**, general manager of sales. **Robert B. Crane** was named assistant to the vice president for marketing and procurement. **R. A. Pape** was appointed assistant to the director of marketing. **D. H. McClain** was named general manager of sales service; **F. C. Akers**, manager, commercial research and advertising; **W. A. Burbine**, merchandising manager, heating products; **M. F. DuChateau**, merchandising manager, plumbing products. **E. V. Habenicht**, merchandising manager, tubular products, and **C. H. Lovelace**, merchandising manager, industrial products. **L. F. Engberg** was appointed purchasing manager, jobbed products; **J. J. Vilis**, purchasing manager, Chicago Works; **J. W. Sharpe**, general traffic manager, and **E. H. Sager**, manager, stationery and printing department.

**Charles S. Shepherd** has been appointed director of purchases for United States Steel's American Bridge Division, Pittsburgh,



**Charles S. Shepherd**

Pa. Mr. Shepherd succeeds **William H. Walter**, who is retiring after 42 years of service with the division. Mr. Shepherd, a mechanical engineering graduate of Stevens Institute of Technology, began his American Bridge career as a

draftsman in 1928. After filling a number of positions at the Ambridge plant, he was appointed chief engineer—facilities and specialties for the division in 1955. He was named assistant director of purchases in 1958.

The appointments of **Bernard J. Doyle** as chief expeditor and **Richard T. Kloos** as chief buyer have been announced by Yale Materials Handling Division, The Yale & Towne Manufacturing Company, Philadelphia, Pa.,



**R. T. Kloos**



**B. J. Doyle**

Formerly chief buyer, Mr. Doyle will be in charge of all phases of expediting in the purchasing department. After coming to Yale & Towne in 1945, he held a number of executive positions in the department before being named chief buyer in 1950. Mr. Kloos will be directly responsible to the director of purchases for the division's buying. He joined the company as an expeditor in 1952.

The appointment of **Robert G. Hills** as purchasing agent at **New York Shipbuilding Corporation, Camden, N. J.**, was announced. Mr. Hills has been assistant to the purchasing agent for the corporation since 1954. Before that he was employed by the National Enameling and Stamping Company, Jacksonville, Ill., as director of purchases.

**FOR READER SERVICE  
CARD TURN TO  
PAGE 36**

# Maintenance— Saving Features You Can See

## LUNKENHEIMER IRON BODY GATE VALVES

*Machined guides . . . another Lunkenheim exclusive, eliminate chatter and reduce wear . . . true-solid discs are unaffected by temperature variations . . . Stemalloy® stems assure longer stem thread life . . . seat rings do not come loose or distort—these are a few of the features that make Lunkenheimer Iron Body Gate Valves the most maintenance-free in the industry.*

Ask your Lunkenheimer Distributor for a comparison test that will save you maintenance dollars, or write The Lunkenheimer Company, Cincinnati 14, Ohio.

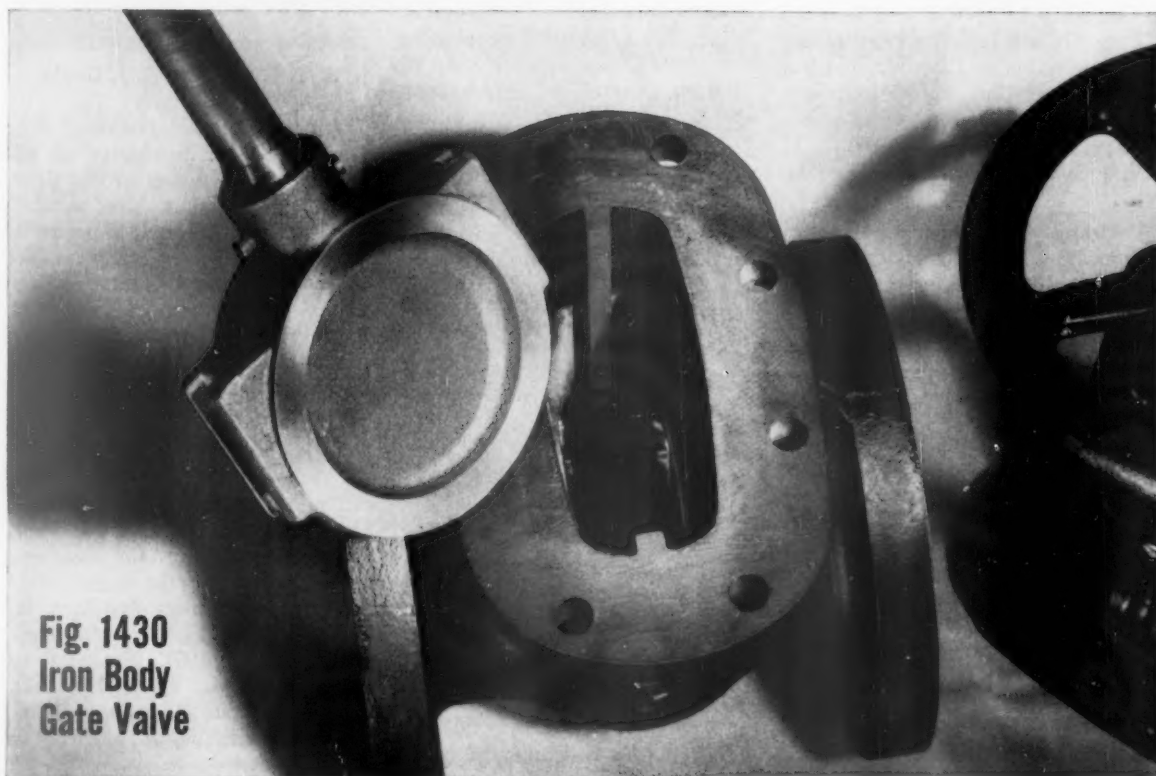


Fig. 1430  
Iron Body  
Gate Valve



**LUNKENHEIMER®**  
THE ONE *Great* NAME IN VALVES

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For More Information Write No. 173 on Inquiry Card—Page 36→



In women's washroom at Connecticut General mirrors are placed over lipstick bars, rather than over washbowls, to reduce the incidence of drains clogged by hair and bobby pins.



At Connecticut General Life Insurance Co., Bloomfield, Conn., Mr. Raymond I. Benjamin, Building Superintendent says: "Our new, modern office building has been planned to prevent jam-ups during rush hours. Principles of washroom design, advocated by Scott Paper Company's Washroom Advisory Service, were adopted to help us overcome washroom traffic problems.



Fountain unit for Connecticut General's print shop employees is centered in the room. Towel dispensers located a short distance from the fountain draw employees away to avoid congestion, speed washing.

## Scott's Washroom Advisory Service offers free booklet on principles of washroom design for efficiency, pleasant appearance, low upkeep

Scott's experience in helping to design and remodel nearly a million washrooms for industry is distilled in this illustrated 32-page booklet we'll send you without cost or obligation. Send for it today.



Notice wall-mounted washbowls in men's room — a Scott suggestion that leaves floor areas unobstructed for quicker sweeping and mopping.

**SCOTT PAPER COMPANY**  
Department P-96, Chester, Pennsylvania

- ☐ Send me a free copy of the Scott Washroom Advisory Service booklet.
- ☐ I'd like to see Scott's 14-minute film on how to remodel existing washrooms for more efficiency, easier maintenance.

Name

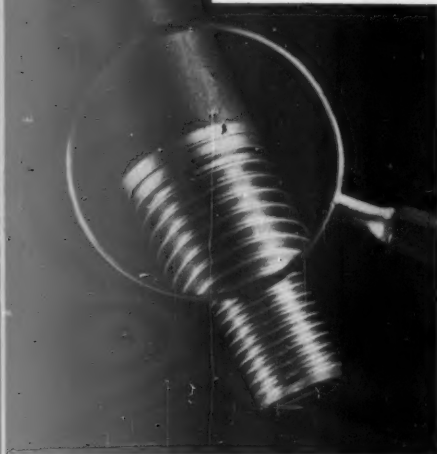
Title

Company

Address

City  Zone  State

ONE ORDER  
•  
ONE SOURCE  
•  
every  
fastener need



## Clean, Strong, Unified Threads from lot to lot!

Assure interchangeability with bolts and nuts that fit as they should—uniform from fastener to fastener, order to order.

Our quality controlled bolts and nuts meet exacting tolerances for proper fits and strong connections. Smooth-turning threads assemble easily yet snugly, and give maximum holding power.

Always insist on dependable Screw and Bolt Corporation of America high-quality fasteners. Sold through leading distributors.

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Other  
Pre-selected  
Performance  
Products

Contact our field representative  
or local distributor

**SCREW AND BOLT CORPORATION  
OF AMERICA**

P.O. Box 1708  
Pittsburgh 30, Pa.

Formerly  
Pittsburgh Screw and Bolt  
Corporation



America's Most Complete Line of Industrial Fasteners

## FOB—"filosofy of buying"

**P**URCHASING'S march to greater recognition continues unchecked. At least that's the impression one gets from reading the papers these days.

**Item 1:** A "Wall Street Journal" story on a quarrel that broke out during the annual meeting of Reliance Manufacturing Company reported:

"Other shareholders got into the spat at this point. Miss Cecile Wermer said, 'I don't think it's fair,' to raise salaries since the company has not paid dividends since last July, and asked why Alex Safie's pay had been raised."

"Very serious added responsibility" Mr. Stearns answered.

"Such as?" Miss Wermer asked.

"Mr. Stearns replied that Alex Safie had taken on new duties in the purchasing department."

**Item 2:** Anne Landers, who writes a syndicated newspaper agony column recently ran a letter from "Swiss Miss" saying she was shocked by the way people in U.S. offices "throw out half-used bottles of paste, almost-new

pencils and erasers, carbon paper, and bond stationery by the pound."

Miss Landers, who can nimbly field any problem from a loaded husband to a half-loaded paste pot, advised Miss Swiss thusly:

"If it's true that the employees with whom you work throw away almost-new materials, someone from 'up front' (like the purchasing agent) should be told. He will be happy to have a friendly talk with 'the sinners.' Suggest it."

**N**OBODY knows the trouble we see:

"It takes a good deal of self-control to be courteous to the carbon paper salesman who insists upon talking his wares when he is the fifth such salesman that morning, and when the buyer's desk is piled high with papers demanding attention. It takes a fairly level head to listen to his chatter while you are trying to sign your mail and to answer two or three telephone calls at the same time. It takes a man with an



*Lyubov*

"... I know every item we have in stock and its serial number ..."

For More Information Write No. 174  
←on Inquiry Card—Page 36

PURCHASING



even temper to keep from expressing his opinions in forcible language when the manufacturer refuses to sell him because the jobbers have filed a complaint. Many times it would be a relief to tell a disgruntled vendor who has lost the order just what you think of a poor loser. Perhaps the frank expression of your feelings in this matter would be justified, but as a matter of policy it pays to keep that sort of information to yourself. As a matter of fact, it pays to keep all your information to yourself in talking with a salesman." (From the chapter, "Qualifications for Success," in John C. Dinsmore's *Purchasing*, published in 1922.)

**W**ALLACHS, a New York City chain of men's clothing stores, has for years run a stimulating and informative series of small ads in various metropolitan papers. Almost every one is a small classic in its field, but we like best the recent one headed "Buying Comes First." It details in a few paragraphs the company's policy on buying and concludes with a statement that we feel could well be placed on the letterhead of every industrial firm in which the true value of the purchasing agent is recognized:

"It is because we buy so carefully that we are able to sell so confidently."

**I**F DORIS GEIL is as good a propagandist as she is a purchasing agent, more and more women will be coming into the industrial purchasing field. Mrs. Geil, P.A. for Broderick & Bascom Rope Company, St. Louis, recently wrote an article for the *Career* issue of *The Zontian*, official magazine of Zonta International, a classified service organization of executive and professional women. She described her work and the opportunities in purchasing for women. The issue, published annually, is used extensively in libraries of high schools and colleges in the United States and Canada. It's also distributed in 15 foreign countries.

JUNE 22, 1959

# SPECIAL WIRE CLOTH PARTS



- STRAINERS
- GASKETS
- ARRESTORS

- FILTERS
- SHIELDS
- BARRIERS

- TRAPS
- GUARDS
- SCREENS

Just to name a few . . . and most of the parts we are making to special order don't really have a name! Our real specialty is fabricated wire cloth parts, made to your specifications.

Any metal, almost any size, almost any shape . . . we can probably assemble it for you . . . faster, better and at a lower cost, than you can do it yourself.

For more information, just send for our latest Fabricated Parts Catalog.

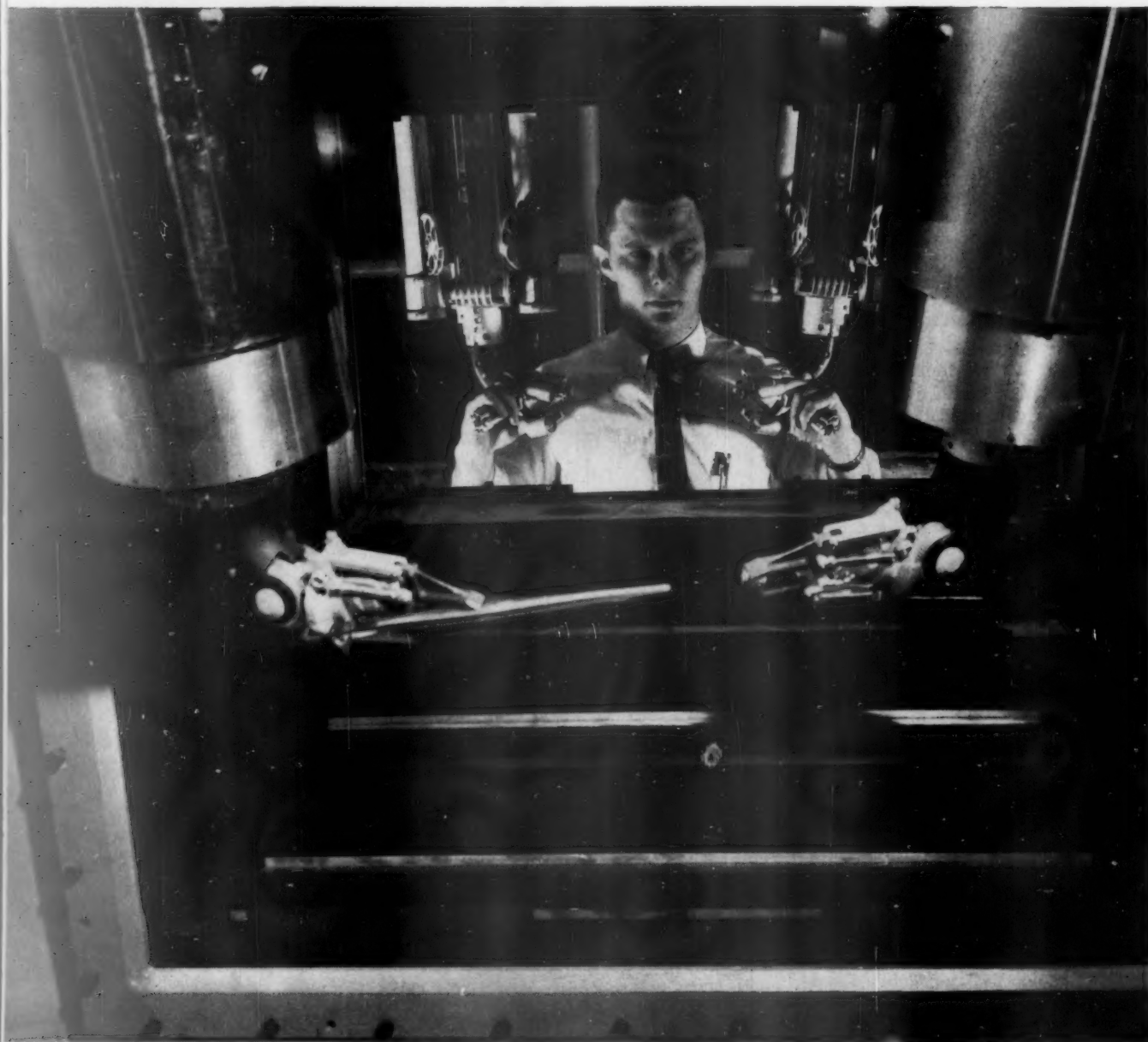


## Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, NEW JERSEY

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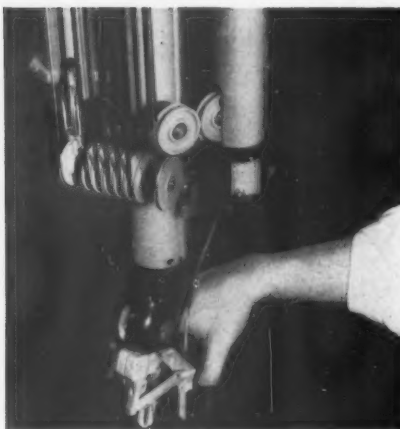
## *How NS solved another special steel problem*



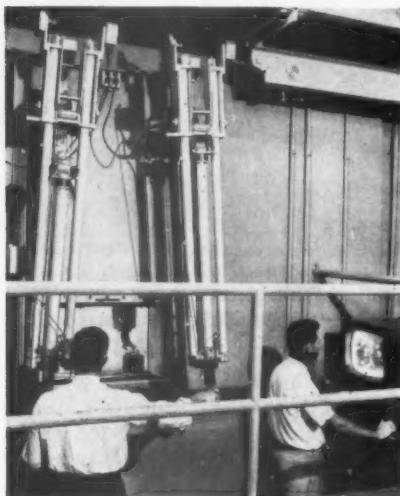
Photos courtesy of Nuclear Systems Division, The Budd Company

**RADIOACTIVE MATERIAL** is handled remotely by operator from behind three-foot thick lead-glass wall. Nilcor strips, which make quick, accurate system response possible, can be seen running vertically from pulleys just above operator's hands.

# SPECIAL NS-ATHENIA STEEL PUTS LIFE IN ATOMIC-AGE ROBOT



**HAND MOVEMENTS** at operator end of master-slave system are translated without distortion, or time lag through seven Nilcor strips (shown in photo) that travel through 15-foot belt and pulley system.



To manipulate radioactive materials with lifelike dexterity, from the other side of a three-foot thick protective wall, requires robot controls with a high degree of precision and quick response.

Ordinary cable or belt arrangements gave too much stretch between the operator's "master" hand movements and the identical "slave" movement at the other end of the system. Movements had to be translated almost instantaneously and duplicated exactly at the slave end of the system. To help solve this problem, robot system manufacturers came to the Athenia Steel Division of National-Standard to find a strip material that would serve in the belt-and-pulley arrangement of the mechanism with minimum stretch and friction and without backlash or overshooting.

**NATIONAL-STANDARD ENGINEERS** at Athenia in Clifton, N. J., recommended Nilcor\* strip (basically a cobalt-chromium-nickel alloy) because of its high fatigue resistance, high tensile strength and exceptionally high corrosion resistance—plus less than  $\frac{1}{8}$ -inch lateral sweep per 8-foot length when laying flat without tension. Experiments with .005 Nilcor strip in the robot systems showed an 80% reduction in stretch and 90% reduction in friction over standard wire materials.

**EXPERIENCED ENGINEERING HELP** of this kind, for jobs requiring specialty steel and wire to meet unique applications, is available to you from National-Standard. For the many thousands of applications where only specialty steel or wire will solve the problem, let National-Standard engineers go to work for you. Write for additional information to National-Standard Company, Niles, Michigan.

**OPERATOR STATION**, shielded by protective wall, has television monitor screen where action inside radioactive room is reproduced as operator manipulates controls of master-slave system.

\*Trade Mark

Manufacturer of Specialty Wire and Metal Products



**DIVISIONS:** NATIONAL-STANDARD, Niles, Mich.; tire wire, stainless, music spring and plated wires • **WORCESTER WIRE WORKS** Worcester, Mass.; high and low carbon specialty wires • **WAGNER LITHO MACHINERY**, Secaucus, N. J.; metal decorating equipment • **ATHENIA STEEL**, Clifton, N. J.; flat, high-carbon spring steels • **REYNOLDS WIRE**, Dixon, Ill.; industrial wire cloth • **CROSS PERFORATED METALS**, Carbondale, Pa.; decorative, commercial, and industrial perforated metals.

For More Information Write No. 176 on Inquiry Card—Page 36

# which coated abrasive sheet would you buy

for hand-finishing  
bare metal parts ?

● Aloxite Metal Cloth ECM    ● Waterproof Paper ALO Type 4

*Misapplications* of basic coated abrasive products . . . sheets . . . belts . . . discs and rolls . . . are most often caused by a lack of information about product differences.

*Outdated* coated abrasive ordering specifications, on items you use every day—even in maintenance operations, can result in sizable losses. Abrasive grains, backings, bondings

and coatings are all combined in manufacture to produce a specific product for a specific job.

Coated abrasive product improvement at CARBORUNDUM is a constant process resulting in new uses, new applications and new savings for customers. Resin bonded coated products, for example, were pio-

neered by CARBORUNDUM and today, their *correct* application provides up to 3 to 1 endurance over other coated products.

Buy belts, discs, sheets and rolls designed for your specific uses. A few minutes to review your coated needs with your CARBORUNDUM Distributor Salesman will be time well spent.

**ANSWER** THE 9 x 11 SHEET OF ALOXITE® METAL CLOTH — 80, ECM, shown on the left, is the recommended product for most efficient hand finishing, blending or polishing on bare metal. Rugged, flexible backing provides durability and the electro-coated Aloxite grain gives this product the real edge in outstanding cutting action and non-loading qualities.

THE 9 x 11 SHEET OF WATERPROOF PAPER ALO, TYPE 4, on the right, is a *new product* designed especially for final finishing operations on undercoats and on lacquered surfaces. In these work areas this product out performs regular silicon carbide sanding papers by 28 per cent — 320 grit is best on undercoats and 400 grit on lacquered surfaces.

## CARBORUNDUM

TRADE MARK

THE CARBORUNDUM COMPANY Coated Abrasives Division NIAGARA FALLS, N. Y.

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H 82-928



## Highlights of This Issue

### ✓ N.A.P.A. Convention Report

A complete report on last week's annual convention of the National Association of Purchasing Agents is featured in this issue. In addition to the texts of major speeches, you will find dozens of pictures of convention activities, announcement of new N.A.P.A. officers, and a report on the new Shipman Medalist.

Among the important convention topics covered are:

**The Argument Over Materials Management:** Two top purchasing figures discuss the pros and cons of having purchasing agents aspire to be materials managers.

**The Outlook for Basic Commodities:** Current trends in fuels, paper, textiles, steel, nonferrous metals, etc. are charted by the experts.

**What's Ahead for Business:** The N.A.P.A. and its consulting economists have earned an excellent reputation for accuracy in analyzing and forecasting business conditions. This year's economic session produced some particularly interesting data that will help purchasing agents and business people in general.

**Purchasing and Management:** Does purchasing rate a position in the top ranks of industry? Two convention speakers—a leading industrialist and a prominent management consultant—offer some blunt advice to P.A.'s on how to get ahead.

### ✓ The P.A. Looks at Business

The superb work of the N.A.P.A. Business Survey Committee is being supplemented by similar committees in a number of local associations. Highlights of these regional reports are given every month in our popular Pulse of Business section. For a look at how your fellow P.A.'s across the country look at business, see The P.A.'s Outlook.

#### In Future Issues

A Special Report on Purchasing Training—  
The P.A. As Company Forecaster—Purchasing as A Management Function—Open Price Purchase Orders.

JUNE 22, 1959

**KLEINS**

209-5 301 202 207-5C\* 208-6C\* 213-9NE

**Quality pliers for industrial use**

\*Pat. applied for

On production lines . . . in the hands of electricians . . . wherever pliers are used, you are assured of the best when they carry the Klein trade-mark—standard of quality "since 1857."

The Klein line is complete—with the right size and style for every job, each designed to do that job better and to give lasting service.

No matter what your needs, be sure to check your supplier and make sure the pliers you buy carry the Klein trade-mark.



**Klein Pocket Tool Guide**  
If you do not have your free copy of the Klein Pocket Tool Guide, write for it today.

#### ASK YOUR SUPPLIER

Foreign Distributor:  
International Standard  
Electric Corp.  
New York

Mathias **KLEIN** & Sons  
Established 1857 Chicago, Ill., U.S.A.  
7200 McCORMICK ROAD • CHICAGO 45, ILLINOIS

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on Inquiry Card—Page 36→

*Gets 40% savings in  
coolant costs  
by change to*

# Standard's Transparent Coolant

**ARGON Oil No. 4**

Chicago Saws, Inc.,  
realizes other benefits in  
switch to this  
Standard Oil product

**Situation:** It all started when a Standard Oil lubrication specialist recommended ARGON Oil No. 4, Standard's transparent coolant to Chicago Saws for use in their grinding operations. This manufacturer of rotary saw blades decided to give it a try. They knew the product was the result of more than three years' work in Standard's research laboratory, and that it had been extensively field tested.

**What happened:** Using ARGON Oil No. 4 in 100:1 concentration, Chicago Saws was able to reduce coolant costs 40%. They also found the work could be seen more clearly when using this coolant. There was less wheel loading. They also discovered the coolant didn't foam and that its exceptional ability to carry off heat resulted in cooler operation. Faster cuts were obtained with finer wheels. Tolerances were easier to hold. Better finishes were obtained. Less frequent wheel dressings were required.

**What you can do:** Get more information about ARGON Oil No. 4 transparent coolant. Call the Standard Oil lubrication specialist near you in any of the 15 Midwest or Rocky Mountain states. Or write: Standard Oil Company (Indiana), 910 South Michigan Avenue, Chicago 80, Illinois.



Using ARGON Oil No. 4, Chicago Saws gets better finish at savings of 40% over other coolants tried. Operator is using .004" cut on heat treated Rockwell 60 C steel.

*You expect more from* **STANDARD** *and you get it!*



*Quick facts about*  
**Standard's  
Transparent Coolant  
ARGON Oil No. 4**

- Clear, transparent fluid
- All chemical. Does not support bacteria growth
- Unaffected by humidity
- Nonfoaming
- Fire resistant
- Odorless

Standard's Bob Stark and Chicago Saws' vice president Paul Bostrom discuss blades and coolants. Bob Stark is well qualified to work with manufacturers on the use of metalworking coolants. Bob has a chemistry degree from Illinois College plus three years' experience at Standard. He has completed the Standard Oil Sales Engineering School course.



## Reflections On the Convention

**I**T WOULD BE impertinent and a little bit foolish to try to pass full judgment on the value of a major business convention only a few hours after it has closed. Those purchasing agents who have just returned from the 44th annual convention of the National Association of Purchasing Agents will be the best judges in due time. They are the ones who went to listen and to learn—at formal sessions and in casual conversations with fellow P.A.'s. They are the ones who will have to determine how good the information and advice they received is when they begin to apply it to their own operations. Only then can they say whether or not the convention was worthwhile.

But a regular reporter of these important and impressive affairs may be permitted a few hasty observations of the convention. Here they are:

- The entire membership of N.A.P.A.—and the purchasing profession for that matter—owes a tremendous debt to the competent and conscientious people who planned and ran this complex meeting. Whatever help you get from a convention is due in large part to their unselfish efforts.

- Attendance figures proved again that purchasing meetings (whether at the national or local level) will generate more interest and enthusiasm when they offer practical help on specific purchasing subjects. The program of the Value Analysis-Standardization Committee provided another notable example again this year.

- The convention is an excellent vehicle for publicizing the significant role of purchasing agents in today's economy. All kinds of data on commodities and general business conditions were picked up by the wire services at the convention and printed throughout the country. Such publicity (as long as it didn't include that awkward and pretentious convention theme "Practical Purchasing in the Space Age") can do nothing but good for the profession.

These are quick conclusions, written at the close of a fine convention. But judge for yourself. Read—or, if you were at the convention—review the major speeches in this issue. Mention them in your reports to management. Study them for help in improving your own methods. Then you'll appreciate the full value of an N.A.P.A. convention.

PURCHASING MAGAZINE  
JUNE 22, 1959

*Paul V. Farrell*

# STAINLESS DIRECTORY

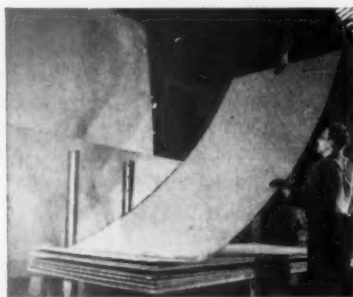
## Buyers Guide to Ryerson Stainless Stocks & Services

Here's a quick guide to the nation's largest stocks of stainless steel—2,351 sizes, shapes, types and finishes of stainless in stock at Ryerson.

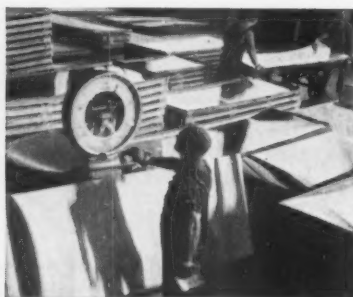
This wide selection assures you of getting the best stainless for every application. Extra care in storage, handling and shipping—such as padded shear clamps to protect finish and flatness of sheets,

guards the high quality of Ryerson stainless stocks. And in addition, the help of full-time stainless specialists is yours when you call Ryerson.

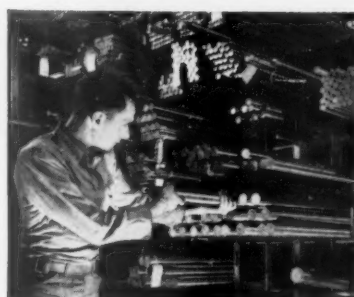
See your Ryerson catalog for a complete listing of stocks and call your nearby Ryerson plant for quick shipment of stainless—any type or size—one piece or a truckload.



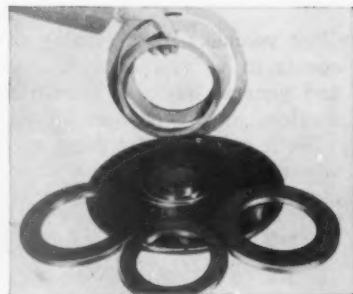
**PLATES**—Available in 9 analyses including plates to Atomic Energy Commission requirements and to ASTM specifications for code work. Also low carbon types for easy welding.



**SHEETS**—11 analyses of Allegheny stainless sheets in stock including nickel and straight chrome types. Also extra wide sheets to reduce welding costs, expanded and perforated sheets.



**BARs AND ANGLES**—Rounds, squares, flat's, hex's and angles in 8 types including free-machining bars with both analysis and mechanical properties controlled.



**RINGS AND DISCS**—Machine cut to your order. This service assures size accuracy, smooth edges, flatness and unaffected corrosion resistance in a lower-cost, ready-to-use product.



**HEADS**—A.S.M.E. flanged and dished heads in types 304, 304L, 316 and 316L are on hand in large quantities, and in a wide range of gauges and sizes.



**PIPE AND TUBING**—Light wall, standard and extra heavy pipe, ornamental and regular stainless tubing. Also screwed type and welding fittings and Cooper stainless valves.

**I·V·B·M**  
Increased Value in Buying Metals  
Ask about this Ryerson Plan for 1959



**RYERSON STEEL®**

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NATION'S MOST COMPLETE SERVICE ON STEEL . . . ALUMINUM . . . PLASTICS . . . METALWORKING MACHINERY  
SERVICE CENTERS IN PRINCIPAL CITIES COAST TO COAST

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**FORTY-FOURTH  
ANNUAL INTERNATIONAL CONVENTION  
NATIONAL ASSOCIATION  
OF PURCHASING AGENTS**

**THE WALDORF-ASTORIA • NEW YORK**

**JUNE 14, 15, 16, 17, 1959**



# Does Management Get Value From Purchasing?

By Mark W. Cresap, Jr.,  
President,  
Westinghouse Electric Corporation

**W**ITHIN the next 20 years, barring war, and assuming we manage our affairs with reasonable competence—we may expect to enter a period of general well-being never before considered attainable.

This statement was published only a few months ago. It is a statement issued by the Committee for Economic Development, and prepared by a special sub-committee whose members include such realistic businessmen as the president of Detroit Edison, the chairman of what

was then Sylvania Electric Products, the executive vice president of the First National City Bank of New York, a partner in J. H. Whitney and Company, and the treasurer of Standard Oil of New Jersey.

I cite this statement because I do not believe that any purchasing agent will be able to function with full effectiveness in the next several years unless he understands the implications of it. And because I believe that the purchasing agent is going to be one of the important forces helping

to bring about this "period of general well-being."

## **Economic Change And Growth**

There can be no doubt that the national economy will experience very great changes and tremendous physical expansion in the decades ahead. There are three massive forces at work today that make change and growth inevitable.

**One is the increase in our population.** We know, of course, that an increase in population does not necessarily mean greater



economic growth. If it did, everyone in India would have a color television set, and every one in China would drive a Cadillac.

**The second force that will change the course of our economy is our insistence on a rising standard of living.** If we maintain no more than the 3% rate of economic growth of the past 10 years, the average family in 1975 will have a disposable income of around \$7100 a year (in today's dollars).

**The third massive force working on our economy is the rising tide of technology.** We have had sharp population increases before, and we have been improving our standard of living throughout most of our history; but our current technological effort is new. It is new both for the scale of the work and for the manner in which it is being carried on.

#### **Purchasing Must Prepare**

It is a basic responsibility of management today to prepare itself for these problems and opportunities. I include the purchasing executive in this responsibility, of course. You will meet

new problems of scheduling, procurement, transportation, receiving, inspection, and inventory control that will make today's problems seem simple.

You will be faced with a much higher level of purchasing activity and with whole new areas of demands for specialized buying talents. You will be called upon, in short, to make a major contribution to the growth, and to a changing, expanding, developing economy.

Your contributions to inventory control, both physical and financial, have been outstanding. Perhaps most important of all, you are working closely with your suppliers with the knowledge and intent that you will make the best possible use of their services, facilities, and products.

I believe it can be taken for granted that you will strive to make the fullest contribution of which you are capable. But, as I see it, there are two eventualities which could reduce your effectiveness.

One of these depends on the top management of your companies rather than on you. The question must be asked: Will management expect enough of its purchasing people? Will it demand the full performance of which they are capable? Will management permit the purchasing agent to use his talents to the utmost?

Under ideal conditions, the purchasing officer participates in a project from its inception. He sits in with engineering, manufacturing, and marketing on the first decisions, beginning with design, choice of materials, and level of quality. He contributes his own experience, knowledge and imagination; and he brings to the problem the rich technical experience of the company's suppliers.

You feel, of course, that you can make your maximum contribution only when you participate—not as a clerical operation—but as a profit-making function.

The second condition that could reduce your effectiveness in the decade of growth and change ahead depends solely on you. It will come about if you yourselves downgrade the scope and

importance of the work you have to do. It will come about if you fall before the greatest occupational hazard of your profession and buy solely or primarily on price—if you make your purchases without adequate consideration of the quality factors that determine ultimate net cost.

Management will always look to you to buy at low unit prices. It takes this part of your work for granted. But it will require far more than that in the future. It will demand a creative cost reduction program. The way to keep the professional status you have, the way to earn the added professional status you want and deserve, lies in providing this program. You know that it does not lie simply in balancing one price against another.

#### **Selecting The Supplier**

One of the most valuable services you can perform is to make the rich technical knowledge and experience of your suppliers work for your company. You can benefit from your suppliers' expenditures on research, development, and engineering. You can multiply your own effectiveness in proportion to their skills and facilities.

If I had to issue only one directive to our Westinghouse purchasing people, to convey to them, the company policy that should guide their efforts, it would be this: It is even more important to know your producer than to know his product.

#### **Purchasing's Opportunity**

If I were required to name the one greatest opportunity which, in my opinion, faces purchasing men, I think it would relate to this area of purchaser-supplier relationship. I feel that American companies have under-used the talents and facilities of their suppliers. I feel that there are tremendous benefits to be gained from an orderly, planned, corporate approach to this problem.

In purchasing language, I feel that too few companies have made their suppliers' development ability a significant factor in the value decision, and that even these few have only begun to exploit this ability.

## Purchasing Honors Go to Outstanding Leaders



Tom English, doubling in brass as new N.A.P.A. president and chairman of the Shipman Medal Committee presents the profession's highest award to H. W. "Chris" Christensen.

**D**ISTINGUISHED records of service to purchasing were recognized in two traditional ceremonies at the convention.

A new President and Executive Committee were introduced at the first general session. Leader of N. A. P. A. for 1959-60 is Thomas O. English, general purchasing agent for Aluminum Company of America, Pittsburgh, Pa.

Mr. English has been with

Alcoa's purchasing department for over 22 years. His election is part of a long tradition of leadership in N. A. P. A. by Alcoa purchasing executives. Thomas D. Jolly, retired head of Alcoa's purchasing department was national president in 1939-40; Ralph O. Keefer, current vice-president, purchasing, headed N. A. P. A. in 1948-49.

Another high point in the convention was the award of the

J. Shipman Gold Medal, purchasing's highest honor, to H. W. "Chris" Christensen. Mr. Christensen, national president of N. A. P. A. in 1952-53 is director of purchases for the Columbia-Geneva Steel Division of the United States Steel Corporation. He has made notable contributions to the advancement of purchasing for many years, both personally and as an officer of the national association.



The new team that will guide N.A.P.A.'s destinies for the coming year: (l. to r.) outgoing president Gordon Burt Affleck; vice-presidents Raymond S. Hill (District 1) and Frank L. Scott (District 2); president Thomas O. English; vice-presidents C. Warner Mc-

Vicar (District 6), John M. Berry (District 4), Sidney L. Jackson (District 7), Everett M. Noble (District 8), W. M. Davis (District 3), Edwin F. Michaelson (District 9), and Paisley Boney (District 5). This group spent a busy week at the convention.





## Convention Views



Minnesotans Bill Stevenson and Harold Hegman catch up on what's happening by checking the convention's own daily newspaper.



Two "first couples" of purchasing, Mr. and Mrs. Bob Shillady and Mr. and Mrs. Gordon Affleck head for the Inform-A-Show.

"If he isn't up here we haven't got him" report the charming and efficient guardians of the convention directory board.



Despite the pressure of a host of municipal problems, New York's Mayor Bob Wagner found time to welcome N.A.P.A. to the Big Town.



General Chairman Dave Gibson beams as one of N.A.P.A.'s most successful conventions comes to a close.



Hats, Chinatown, New York shops, and other exciting topics get a going over at the N.A.P.A. ladies' luncheon.

# Materials Management —Myth or Magic?

**I**S materials management a myth or is it magic? That was the big debate at this year's N. A. P. A. convention. Participants included ex-N. A. P. A. president E. F. (Andy) Andrews as moderator, A. M. Kennedy Jr., vice president—purchases of Westinghouse, speaking in favor of materials management, and George A. Renard, ex-N. A. P. A. executive secretary and associate editor of the *Journal of Commerce*, speaking against it.

Andy Andrews set the stage by describing the issue. How broad should the purchasing function be? Should it stick to buying or should it embrace such activities as receiving, shipping, traffic, inventory control or production control?

## Committee Is Working

Speaking for the "pros" was Andy Kennedy, who is currently serving as chairman of the N. A. P. A. committee on materials management. Kennedy said, "our committee is working now at the problem of isolating the conditions, or kinds of conditions, in various manufacturing industries, that might lend themselves to materials management."

He continued, "let's first acknowledge that in most manu-

facturing enterprises the responsibility for inventory control of materials and parts bought outside is traditionally that of the manufacturing organization. Let's not ignore the logic of this tradition. The basic job of a manufacturing organization in my own company and probably in yours, is to plan the availability of machines, men and materials, and to implement this planning by successfully combining these three elements into the required volume of production at the minimum cost."

Kennedy then pointed out that the P. A. should go after full responsibility for materials management when:

- (1.) The product is such that opportunities to influence product design and reduce product cost are relatively small—and inventory management can yield a great cost contribution.
- (2.) Performance of the inventory control function is so poor that it seriously limits purchasing performance in buying at minimum costs—by inflexibility of order quantity—chronic shortages—failure to communicate changes—failure to heed warnings on market conditions or forward buying, or any other reason, and where you feel major improvement can be made.
- (3.) The proportion of direct material to inventory material is high—and you are already controlling most of the materials used—as for example in a job shop.

Kennedy then agreed that other department heads might consider a move towards materials management as a "bid for power" by purchasing. But he

asked the P. A.: "Don't you owe it to your company, and yourself, as a member of management, to fight for its success?"

## The Other Side

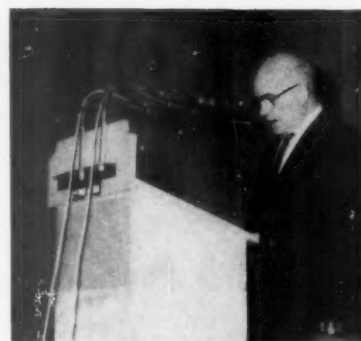
Speaking against materials management was George Renard. He said that "when the proposal is made that this wide sweep of materials management should be piped into a wizard called the materials manager, you will find also that purchasing has been submerged . . . and we need not argue whether it is decentralized or discontinued."

Mr. Renard added that, "there are some square-hole types of organizations where this new concept of materials management fits fine. One is the mechanized operation that produces the same thing forever after. That operation requires a sales manager, a supply manager, and a facilities manager who would be the old-fashioned master mechanic. Production is scheduled by the capacity of the equipment and so are sales and purchases. Not many companies are operating in that profit paradise."

Mr. Renard pointed out that purchasing already has substantial influence beyond the scope of just buying. He recommended that purchasing not go further and hi-jack authority that rightfully belonged to manufacturing and other functions. "A better solution would be a task force where inter-departmental problems in materials management can be threshed out between purchasing, manufacturing, and other basic functions of the business."



Andy Kennedy spoke for the "pros" on materials management . . .



. . . while George Renard viewed it as a threat.



The directory board set up in the Silver Corridor by Purchasing Magazine brought many old friends together.



John Barry, District 4 vice president, stopped his tour to pose with Bob Bogart of National Vulcanized Fibre.



Outgoing President Affleck brought a stirring message and report to the convention.

Picking up advance registrations was made easier with the system developed and carried out by the ladies from national headquarters.



Walt Willets (right) 8th District Educational chairman and his buyer, Ronnie Allen, touring the Inform-A-Show.

"Ask Me" buttons on members of the New York reception committee brought many questions — and answers.





There was a moral to each round. This one is "Vasco unfair to unorganized purchasing agents who are in a rut."

## VASCO's Fight of the Century Stimulates Standardization Ideas

*The Value Analysis and Standardization Committee's presentation was a show-stopper again this year. This time the setting was Madison Square Garden.*



The trainer (Ken Cruise) stood by ready with sponge and water pail.



The Doc (Harlan Cross) made periodic check-ups on the contenders to make sure it was a good clean fight.



Les Notchange waves his arms in a moment of false triumph. (The winner and champion was naturally Kid Vasco.)

This panel of experts (which changed round to round to permit each N.A.P.A. vice president to speak) described how P.A.'s could apply V.A. principles.



The Champ, Kid Vasco (Phil Kron), began to show the strain by the 12th round. It was rough, hard fought battle all the way.







The lobby outside the Inform-a-Show was crowded throughout the day.



Every general convention session packed the grand ballroom of the Waldorf.



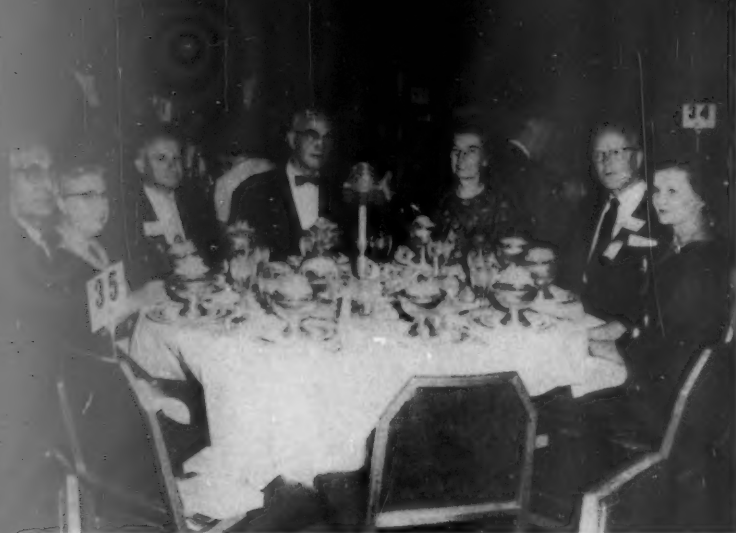
New N.A.P.A. prexy and his lovely lady touring the booths at the Inform-a-Show.



Three members of the Indianapolis Assoc.: (l. to r.) John Berry, Lester Davis, and E. W. Wolfe.

General convention chairman David S. Gibson was able to locate many old friends via the Purchasing Magazine Directory Board.





Distinguished purchasing couples at the Early Birds' Dinner included George Wilson, Mr. and Mrs. Harlan Cross, Mr. and Mrs. George Renard and Mr. and Mrs. Harold Berry.

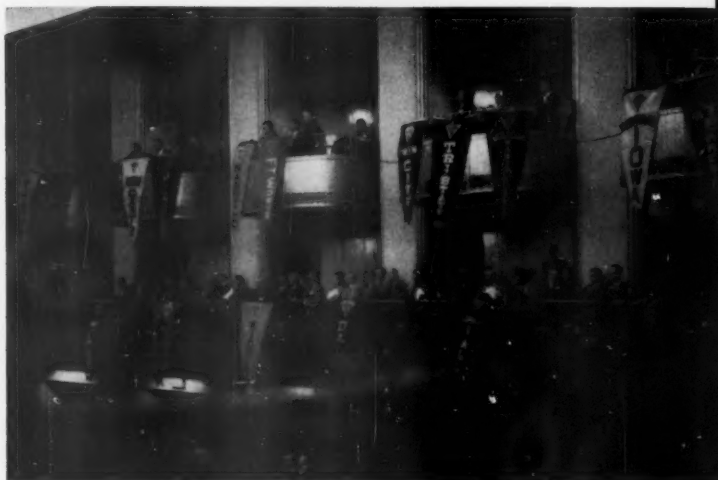
This is just one of nearly 800 charming ladies that either attended the Convention with their husbands or attended as P.A.'s in their own right.



Part of the outgoing 1958-59 Executive Committee in one of their last appearances.



If you don't register early, you have to cool your heels in a long line like this.



Turnout was heavy for all General Convention sessions (even those starting at 9:00 am). Even the balconies were full of P.A.'s eager for information.

# The Commodity Outlook

*Market forecasts for the major commodities based on reports made at N.A.P.A. national committee forums.*

**I**N WHAT was certainly one of the most outstanding of all N. A. P. A. conventions, the commodity reports made by the various forums at the national committee sessions rate among the top attractions of the entire meeting.

For many P. A.'s, the clearcut analysis and forecast of market conditions in the various major commodities alone was worth the trip to New York. The vital concern P. A.'s have in trying to keep up with rapidly shifting markets was apparent from the packed audiences that attended most of the commodity forums.

In view of the touch-and-go steel situation, it was not surprising to find that this meeting was exceptionally well attended.

Much of the success of these meetings was due to the efforts of the chairman of the various national committees. Here's how the market outlook shaped up for the various major commodities:

**STEEL:** Industry and union must find a way to hold the line in the current labor negotiations. The recent upsurge in foreign competition is one of the major factors for the steel companies remaining adamant in their position not to grant any substantial wage increases.

The other consideration is that most of the smaller steel companies, those ranking 9th, 10th, 11th and 12th, cannot absorb a

wage increase without going into the red, since they can only raise prices if U. S. Steel does.

Industry feels very strongly about this position. They know full well that a substantial price increase will not only be harmful to their own competitive position with foreign manufacturers but will also make companies that use steel vulnerable.

The negotiators representing the steel industry will not retreat from their position and will hold the line. The only thing which can force the steel companies to change will be intervention from Washington.

The unions realize the difficulties encountered by the employers but Dave McDonald can-

not leave the bargaining table without some gains. As president of one of the strongest unions in America it is important for him to save face.

As a counter move against the industry statement that steelworkers are receiving about 80¢ over the average for industry in general, Mr. McDonald has started calling attention to the \$1200 and \$2600 incomes among his members.

The industry has on the other hand suggested a six or seven point program by which it hopes to reduce costs. The proposed program would include a one-year freeze on wages and elimination of the cost-of-living factor.

If the union accedes, the steel companies could then grant additional fringe benefits. Thus: no substantial wage increase meaning no rise in the price of steel; unions get credit for fighting inflation and yet reap some benefits for their membership.—*Father William T. Hogan, director of the industrial economics program, Fordham University.*

**NATURAL GAS:** The cost of natural gas is definitely due to rise. Two important forces behind the expected price increase: (1) It's going to be more expensive to find and develop new gas reserves; (2) The cost of equipment used by the gas industry is certain to go up. Added to this,



Addressing the Paper Forum is the Group's chairman, T. A. Corcoran. Listening intently is Stuart Edgerton.

of course, is the impact of overall inflation.

However, the increase in the price of natural gas is expected to "take place in an orderly and reasonable fashion," and the gas producers believe they will be able to maintain "a good competitive position" in relation to other fuels. So far as the P. A. is concerned, this obviously means that the gas industry, at least, figures there will be price increases in all the other major fuels.

Offsetting the general trend of higher prices for natural gas is the fact that advances have been made in seismic and other survey techniques which make it possible to detect deep oil and gas-bearing sources before actual exploratory drilling. In addition, the increased production needed to meet future demand should help to keep production costs down. No one, however, believes that that these trends will be enough to offset the much stronger forces that are pushing prices up.—*C. E. Loomis, senior vice president, The Columbia Gas Systems, Inc.*

**BITUMINOUS COAL:** The outlook for coal is much the same as it is in natural gas. A price increase in the near offing. The feeling in the industry is that the price of coal is too low and that profits are inadequate. Coal producers believe that an increase of 50¢ per ton would be "insignificant when compared with 1948 prices" or when viewed against the background of the inflation of the post-World War II years.

To quote the price outlook as presented at the N. A. P. A. fuels forum, an increase of 50¢ per ton "should be in order for next year."—*C. J. Potter, president, Rochester & Pittsburgh Coal Co., Indiana, Pa.*

**FUEL OIL:** Unlike the report made on residual fuel oil at the fuel forum, in the past year, there has been a marked change in the market. Previously the outlook was usually for comfortable volume increases with wide fluctua-

## No Rise Seen in Nonferrous Metals

Short range prediction for nonferrous metals is that no increase in price is imminent.

Estimates for aluminum shipments in 1959 for primary, secondary and imported grades, were for approximately 20 to 30 percent increases. Competition is more pronounced than at any time since World War II. Beyond the June 30 guaranteed price deadline, the producers may plan to revert back to their policy of "price in effect at time of shipment." Some reports indicate there will be a price increase after the new wage contracts are negotiated August 1.

The U. S. copper price is being held in check somewhat by the possibility that a considerable tonnage may be released from the U. S. Government stockpile if there is pressure on prices due to temporary copper shortages. Copper prices in the foreseeable future should remain fairly stable in the 30-35¢ range.

Continuous galvanizing is playing an important part in the expanding use of zinc as a

protective metal, and the outlook for the demand growth for this use of zinc is excellent. If increased consumption continues, it could be the highest since 1955.

In nickel, no price rise is expected this year and delivery should be no problem.

During the past few months, availability of tin has increased as a result of sales by the Buffer Stock Manager. Stocks held in official warehouses in England have dropped from approximately 13,000 gross tons in late February, 1959, to about 7,500 gross tons today. Tin prices have held around the current level of \$1.02 per pound and it is expected that the price will remain near that level.

Brass mill production has increased considerably. Brass foundry ingot shipments for the year-to-date are well ahead of 1958. Demand for brass and bronze ingot continues active but supply is adequate and ordering is recommended on the basis of market price at date-of-shipment.

tions in price. The current forecast is for continuing volume gains, but prices are expected to be much steadier. The shift in the price picture was attributed to government control. *David J. Sullivan, executive vice president, Petroleum Heat and Power Co., Inc.*

**TEXTILES:** Generally, textile prices are higher than a few years ago and will advance further, especially in finished goods. Reliable industry sources indicate that a considerable volume of grey goods and print cloth has been purchased for delivery during the first half of 1960 at prices about 10% above those which prevailed in the early part of 1958.

Textile inventories, on an overall basis, are low. Inventories in April, 1958, were equal to 72% of unfilled orders. For the same

month this year, the ratio was down sharply to 27%.—*James L. Rankin, Cannon Mills Company.*

**PAPER:** The price of newsprint should not increase during 1959. Because of the upturn in newspaper advertising, the additional consumption will provide the profits that most manufacturers feel are necessary.

It's likely that the fall of 1962 will see an extreme shortage developing. However, this can be averted if users planning ahead on a long-range basis can get assurance from suppliers that their needs can be met. It may also pay to check new suppliers and new processes as a way out.

—*T. A. Corcoran, Courier-Journal; James E. Morse, Keller-Crescent Co.; R. M. Betts, Wesleyan Univ.; and J. J. Miller, Metropolitan Life.*



## There Was A Lot of Fun Too....



The show following the Early Birds' Dinner was called by the wife of one P.A. "the best I've ever seen at a convention." Many stars entertained the audience for almost two hours.



The two dinners on Sunday and Tuesday evenings provided a fine opportunity for P.A.'s and their

ladies to visit with old friends and make new acquaintances.





Apparently Fred Schmitt (right) told a funny one. At least he got big smiles. J. W. McNeil, Penny King, and Carl T. DePrima had a good laugh.

H. E. Boe (left) sales manager of Phelps Dodge talks with T. J. Scanlan, RCA purchasing agent.



Mr. and Mrs. George McGowan of Ball Bros. Co., listen to the convention impressions of Ray C. Haberkern.

P. F. Lee (left) from Anaconda discusses a mutual problem with F. A. Schefler of Phelps Dodge Corp.



Shopping bags and shop talk was the order of the day. Here Bill Coates (left) chats with W. C. Meyer, W. H. Harrison, and J. H. McDowell.



Kennecott Copper: (left to right) N. W. Camp from New York; R. E. Cromar, Salt Lake; E. G. Stebbins, Hayden, Ariz.; and R. M. Arnn, McGill, Nevada.



# Practical Tools for Better Inventory Decisions



W. Evert Welch

**S**IMPLE BUT highly effective tools to aid in making better inventory decisions were described at the convention by W. Evert Welch, corporate consultant, inventory management, Minneapolis-Honeywell Regulator Company.

Responsibility for inventory management is increasingly being placed on purchasing agents, Welch warned. He said P. A.'s should prepare now to understand and use the basic techniques of scientific inventory management.

Welch's presentation was built around a booklet of charts distributed to the audience prior to his talk. The charts were described as guides to the two decisions that create inventory—"how much", (or order quantity), and "when", (or reorder point or due date). "Used as a check," he said, "they give an indication of the consistency of present practice as well as its relative magnitude. Used as working tools, they weigh the factors that relate to the problem and compute optimum answers.

## No Slide Rule Necessary

"There are two principal advantages to the use of charts, tables or formulas," Welch continued. Their application produces consistency of result considering the factors appropriate to the problem. And they provide tools for implementing changing management policy. They help make those changes in a controlled, orderly, predictable manner."

The charts in the booklet are

a form of nomograph or alignment chart. They are, Welch pointed out, simple substitutes for special slide rules or lengthy tables. He had the audience do several problems.

One problem involved determining the best quantity to buy, given three constants, inventory carrying cost, cost per order, and weekly usage. On the four column chart the user connects two figures (carrying cost and cost per order) with a ruler to get a "pivot point" on the chart. The pivot point refers to a certain ratio of cost per order to carrying cost. To obtain the most economic order quantity, the user goes to another column of figures—"weekly usage in dollars"—and draws a line through the pivot point. The extended line will hit a figure in the "order quantity in weeks" column.

Welch plumped for the use of "simple formulas with estimated factors" as against waiting for the completion of current studies on more complex techniques. "The very act of being consistent results in material gains for most of us," he said.

"This isn't doing something simply for the sake of doing it," he continued. "Any reasonable formula with approximate constants produces a balance within inventory that improves its distribution. For the most part, the result is more inventory in one item than in another where that relationship is logical, even if the absolute levels of both items are subject to further refinement.

"This is not to suggest the blind application of just any rules with-

out a study of their suitability or effect. It is to suggest that gradual improvement may be the logical road to ultimate precision."

Welch warned against trying to substitute charts, formulas or other mechanical aids for good judgment. "They are only the tools," he said, "for the expression of good judgment in a form that can be used by others or that can be adapted to data processing machines. Statistical controls are the 'autopilots' in inventory. You as managers should create the control systems and manipulate the system constants to accomplish your goal."

## Segment Your Inventory

One of the most important steps to take before beginning any inventory analysis, Welch said, is the segmentation of all inventory items. The P. A. will find by ranking items in descending order of annual or monthly usage in dollars, that 2% to 4% at the top of the list will usually include 50% of the dollar usage, he said. Fifty per cent of the items at the bottom of the list usually include only 2% to 4% of the total dollar usage.

This method has been described with many titles, according to Mr. Welch, such as "A-B-C", "Blue Chip-Red Chip" etc. "By any name he declared, "it suggests that the few items with the large dollar activity make up an attractive area for the reduction of inventory. And the many items at the end of the list make an equally attractive area for the reduction of paperwork."



The girls working at the Directory Board had a busy time listing new arrivals.



Immediate past president Gordon Affleck and his wife had an eventful week.



The reader: J. H. Rhodes of Republic Supply Co.

Specialized purchasing know-how was sharpened at various specialized meetings like the steel forum.



The Value Analysis and Standardization Committee's new slide film is a show stopper.

Registrations for the 1959 convention were at record levels.



Journal of Commerce editor H. E. Luedicke (c.) was among the large crowd at the Early Birds' Dinner.





# Survival of the P.A. In the Space Age



Edward Walther

*The challenges in the era of the Sputnik are the greatest in purchasing's history. Here's how P.A.'s can meet these challenges.*

**A** GUIDE TO the survival of the purchasing agent in the space age was offered to the convention by Edward Walther, partner in the management consulting firm of Management Development Associates.

Speaking before an enthusiastic audience, Mr. Walther described some of the challenges facing P.A.'s today. He urged them to prepare to meet these challenges as they arise in the future.

The first challenge he cited is the increased demands of current technology. He noted the many technical changes today that are going on at ever-increasing rates.

"Never before in history has the rapidity of change been such an ever-present factor in almost every area of living," he said. "Yesterday's innovations are today's commonplaces to such a degree that the fact of change itself is a 'commonplace' thing to most of us, even though the extent of current changes is breathtaking and the implications are vast."

## **Greater Complexity**

Another challenge is the greater complexity in today's industrial society, he declared. He said that success in the struggle for survival—whether individuals, groups, or nations are concerned—depends largely on the ability to learn, to de-

velop ideas, and to adapt one's self to change.

In addition, Mr. Walther said, changing managerial techniques are a challenge to "the world you have to deal with." He added that our business values have been changed in many ways as well.

The consultant told the packed convention session that there are six outstanding personal barriers to survival. "Anyone who is skillful in overcoming these barriers will find his ability to go outside the range of the familiar on his own job significantly increased," he said.

The barriers Mr. Walther mentioned are:

- Knowledge
- Facts
- Communications
- Words
- Personal Growth
- Habit

## **More Flexibility**

"These six personal barriers have great importance to anyone who seeks to improve his own effectiveness," he said. "An awareness of their impact in specific situations will bring a greater flexibility in approach—a flexibility which is the starting point for action."

In hurdling these barriers, Mr. Walther suggested that six characteristics of leadership have key significance. He listed them in this order:

1—The leader must know who he is; that is, he must have high self-esteem.

2—He must have a clear understanding of the frame of reference within which he must operate, and the significant relationships out of which that frame of reference is constructed.

3—He must be able to educate those whose understanding is essential to effectiveness, whether they are superiors, subordinates, or associates.

4—He must be able to communicate a plan of action to those who must carry out his program.

5—He must have high sensitivity to what is going on around him, in terms of action, so as to be able to judge the appropriateness of his total views and actions.

6—He must have self-correcting devices to measure his own level of effectiveness in terms of method in all areas in which he must function.

Mr. Walther noted that "as pressures build up in any job, they frequently come from below quite as much as from above the individual's particular organizational level. Someone, generally the next higher level supervisor, tends to fill this vacuum—thereby creating an equal and often greater vacuum at his particular level of action."



## Purchasing People at the Convention



B. O. Belknap (left) and Leon De Polac, conventioners from National Lead Co.



The Washington, D.C. Association had good representation. Here are three members coming from one of the meetings held in the Grand Ballroom.



Phyllis Erd, Rosemoor Mfg. (left) and Anne Repko, Austenal Lab, surround Helen Waterman, first woman elected to Chicago executive board.

Arthur Reinke (left) H. H. Brenneis and L. J. Hussey rest their tired feet after completing a tour of the Inform-A-Show.



John J. Rooney, Melpar, Inc., new president of D.C. association stands between Mr. and Mrs. D. A. Cook, Mayflower Hotel, outgoing prexy.





**Chet Ogden and Lyle Treadway (with hat) both rush smilingly to greet friends as Monday morning's session breaks up.**



**Herb Lyport, Wyman-Gordon Co. and George Seguin of the Norton Co. study program while waiting for talks of Frank Pace and Sen. Morton.**



**Harold Eske, Hydraulics Tool Corp., Sheyboan, Mich. was one of the many P.A.'s to pick up and read Purchasing Magazine's convention daily.**



**Mr. and Mrs. R. L. Legate of Texas Instruments in Houston talk about things "down home" with J. Richard Brown of the Southwestern Purchaser.**

**L. C. Teague, Tenn. Coal & Iron (left) C. R. Raftery, Autonetics, and H. W. Abramson, Consol. Western Steel give answers to one of the survey girls.**



**A. W. Soell, Gaylord Container, and former N.A.P.A. president (center) has a serious talk with A. J. Melke (left) and W. C. Allen.**





## INFORM-A-SHOW



Looking for packaging ideas? Hind & Dauch had 'em.



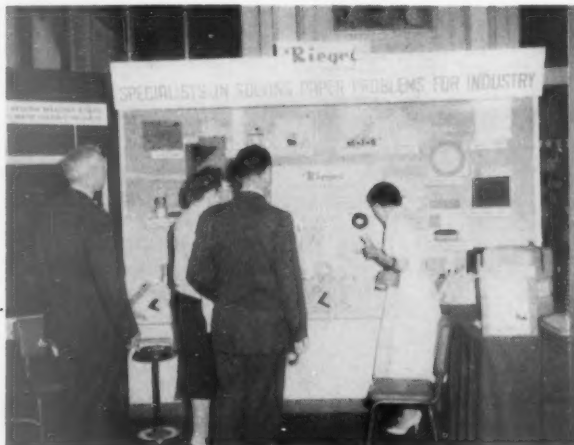
Tete-a-tete at the Garlock Packing booth. Garlock has exhibited for years and the results have always been worthwhile.



In the Age of Automation, you can't help but call on Link-Belt for specialized assistance on materials handling problems.

Riegel Paper is proud of its motto "Specialists in Solving Problems for Industry" which was featured in its excellent display.

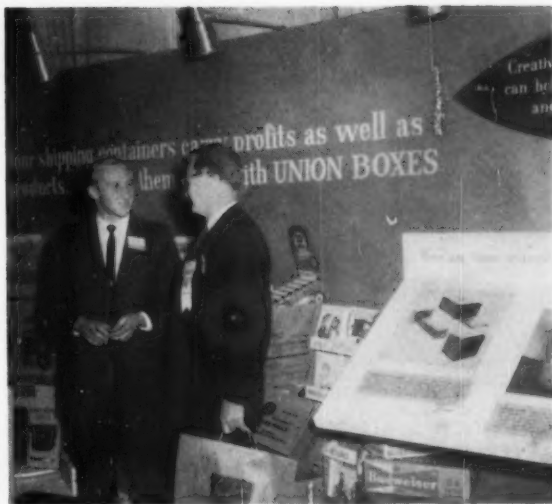
New products have pushed Minnesota Mining's sales up many times in recent years. And there's no sign of a let-up in the company's growth.







This is just a section of U. S. Steel's prizewinning exhibit at the Inform-A-Show. U. S. S. always has new ideas to offer.



Lots of info about corrugated containers at this booth. Union Bag-Camp Paper people take pride in coming up with new packaging ideas.



New insecticide and other new products were offered at the Esso booth. Smokers and do-it-yourselfers like the lighter fluid and oil too.



Crown Zellerbach is a big company with a small company's individualized approach to industrial packaging problems encountered by P.A.'s.

For the latest in magnet wire (or any other copper wire product), you can't afford to overlook Essex Wire's attractive convention display.



Looking for lighting ideas? Representatives of General Electric's Large Lamp Department were on hand with plenty of know-how.



Scott Paper had a number of lovely ladies to greet visitors to their Inform-A-Show booth. Its prize winning exhibit drew large crowds.



Lots of activity around the Lamson & Sessions booth. Almost everyone buys fasteners and there are lots of new developments in the field.



A few lucky P.A.'s won TV sets at the drawings held at the booth of the Fibercast Company and Continental-Emsco Company.



Roebling (like many others) is an old time exhibitor at the convention. Although its products are basic, Roebling always has plenty of new ideas.



U. S. Steel's big exhibit (this view shows the American Steel & Wire and the U. S. Steel Products segments) is always a crowd catcher.



This exhibit by Gaylord Container Division of Crown Zellerbach was voted "most informative" by Inform-A-Show judges.

# The American Economy In The Space Age

**"OUR ECONOMY** clearly has acquired new key forces to sustain and even surpass our postwar pace of growth," said Douglas Greenwald, chief statistician, Department of Economics, McGraw-Hill Publishing Co., Inc.

Mr. Greenwald, together with W. H. Chartener, economist at McGraw-Hill gave a tandem talk on what the American economy will be like in 1969—what they called the Space Age.

Their long-range forecast preceded and served as an introduction to a panel discussion by four of the nation's leading economists.

Before a packed audience in the Grand Ballroom at the Waldorf-Astoria on the last day of the convention, Mr. Greenwald started off with an explanation of the importance of long-range economic planning. He threw the ball to Mr. Chartener who spelled out what the purchasing agent's life will be like in 1969.

He said that "most large companies will have worldwide operations." The economist declared, "and you may be placing orders anywhere in the world."

Business investment has in-

creased tremendously between 1946 and 1959. By 1969 it should total \$80 billion. Growth is likely to double in such fields as aluminum, chemicals, instruments and controls, electrical machinery, and office machinery.

Mr. Greenwald gave six forces which are going to contribute to this tremendous growth. They are:

- (1) The growing importance of research and development;
- (2) A backlog of overage and antiquated facilities;
- (3) Continued pressure of rising labor costs;
- (4) Pressure for more capital equipment;
- (5) Broad development of long-range planning of business investment; and
- (6) More assured and better balanced sources of funds to carry out a steadily increasing investment program.

"Developments of the type I have spelled out," said Mr. Greenwald, "give promise that in the next decade investment in new producing facilities will continue to expand as it did in the past decade."

Turning to the question of whether the demand for consumer goods will grow as it has, Mr. Greenwald predicted: "the market for consumer goods ten years from now will be vastly larger than it is today."

"A dynamic increase in consumer spending, however, depends not only on the number of families but also on how well fixed these families are with spendable money. By 1964 the median family income will be about \$5500 (before taxes) and in 1969 it may be \$6250."

The next phase covered was government spending. "Over the years we can look forward to

slightly rising expenditures by the federal, state and local governments. Defense spending need not get out of hand, because increased efficiency in the science of war and the procurement of the weapons of war will hold down the dollar amount that must be devoted to the defense program.

"The government's total contribution to economic stability and growth includes much more than the effects of a continuing defense program. The government can counter-act a business recession by reducing taxes."

After the optimistic picture painted by Mr. Greenwald, his alter ego raised the question, "What can go wrong?" Outside of a major war one development that might upset the cheery forecast Mr. Chartener said, "would be a violent swing to the left or right by the party in control of the federal government."

"A more likely source of trouble is inflation. If inflation got out of hand, the effects would be calamitous," he emphasized to the capacity audience that packed the Grand Ballroom.



W. H. Chartener



Douglas Greenwald



Past Vice Presidents Lyle Treadway (left) and Russ Stark (center) were kept busy greeting old friends from local associations.



Carrier Corp.'s Tony Ruediger takes over as Steel Committee chairman.



Local New York papers carried big stories on the convention.



President Mark Cresap (l.) of Westinghouse chats with Program Chairman Gailon Fordyce following his challenging keynote speech.

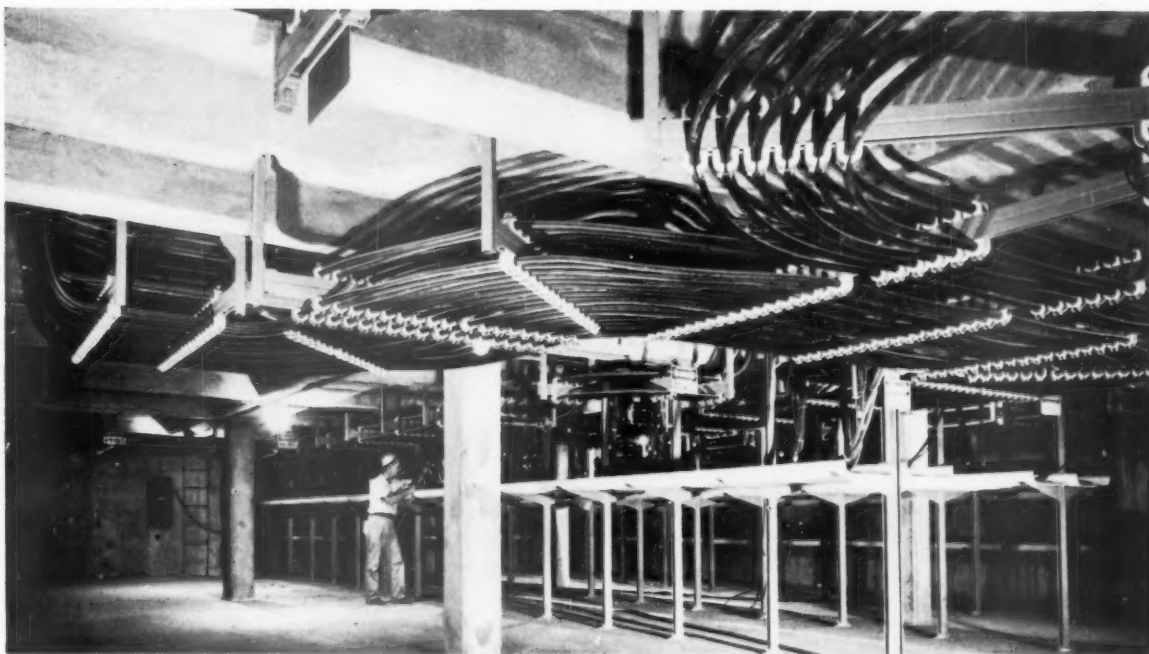
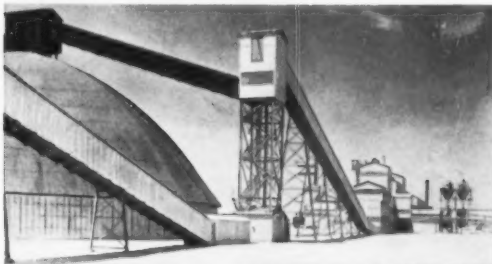


Members of the New York Association asked to be asked and hundreds of conventioners did just that.



# More Than 70 Miles of Cable in This New Plant

New National Potash Company plant, near Carlsbad, N. M., covers 10 acres, produces up to 800 tons of potash concentrate daily.  
General Contractor: Stearns-Roger Manufacturing Co., Denver, Colorado  
Electrical Distributor: Fairmont Supply Co., Fairmont, West Virginia  
Electrical Contractor: Service Electric Co., Carlsbad, N. M.



Banks of 480-volt feeder cable converge under ceiling in No. 2 substation basement of new National Potash Company plant. Like all the cable used in this installation, it's Roebling and made to withstand the tough corrosive conditions.

## And It's All Roebling Because...

We're in Carlsbad, New Mexico, at National Potash Company's new \$12,-000,000 refinery. More than 375,000 feet of cable were installed in this plant by Service Electric Company, Carlsbad, New Mexico, the contractor. And all of it is Roebling!

Let Mr. Harvey Mathews, vice president of Stearns-Roger tell you some of the reasons why: "Cable specifications required an insulation that was tough and durable, because here, as in all plants of this type, there is the ever-present factor of corrosion caused by atmospheric moisture being absorbed into the salt dust, forming brine, as well as the corrosive action of the chemicals present. Obviously," continues Mr. Mathews, "we had to have wire and cable insulation of superior quality throughout, to protect the plant's elec-

trical system from insidious failure."


Every Roebling cable and wire is built to last—and last some more—even under the severe conditions prevailing in applications like this potash refinery! Roebling never takes short cuts. Each

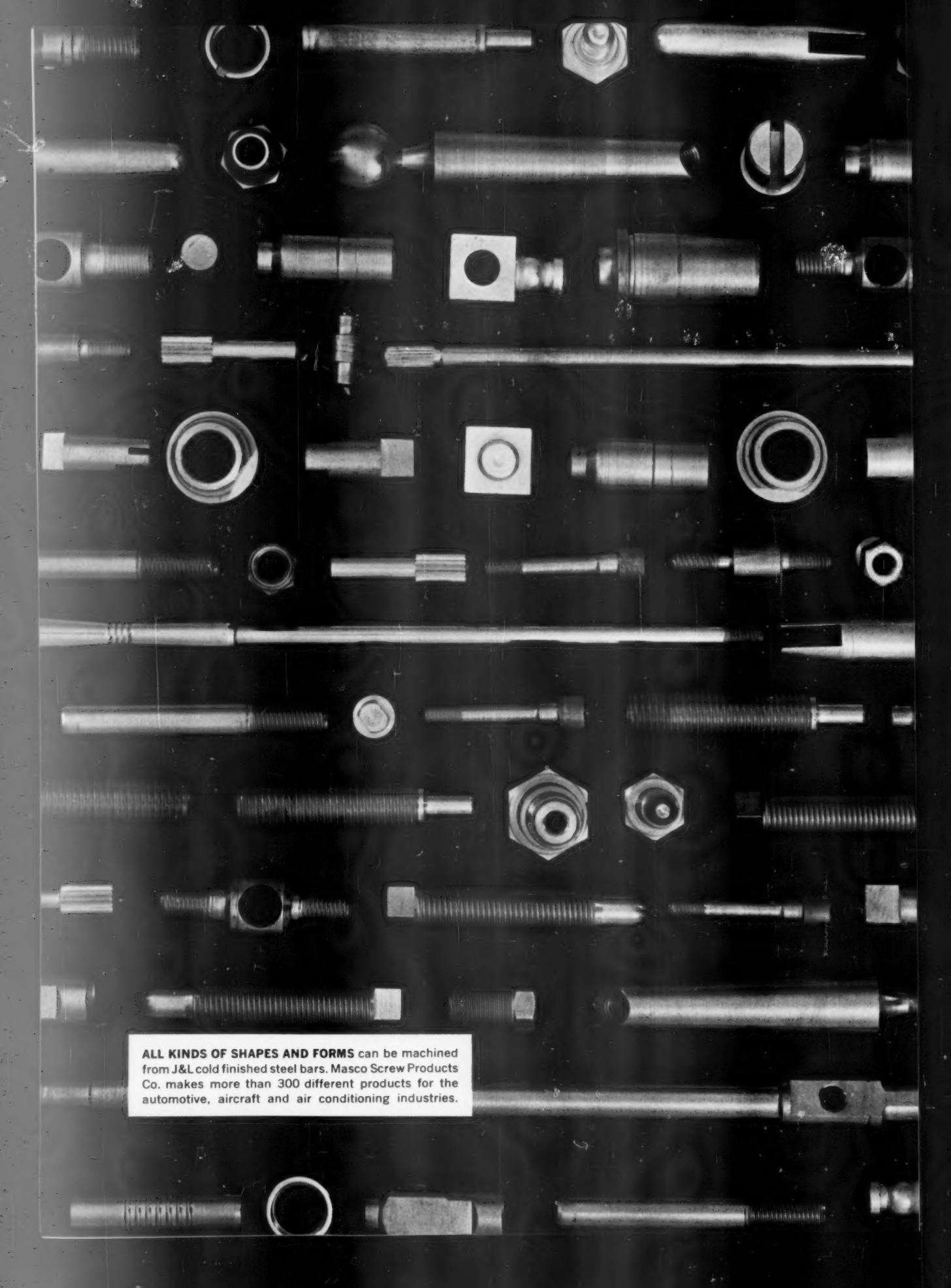


Harvey Mathews, vice president, Stearns-Roger Manufacturing Company, discusses building plans with Jack Lorenz, resident engineer.

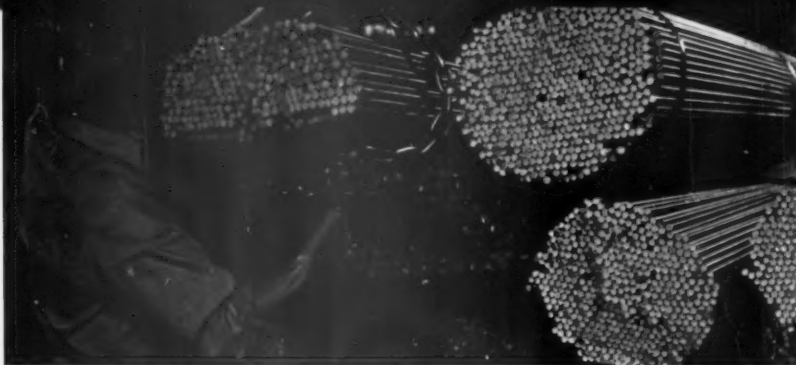
Roebling wire and cable is made with scrupulous care to assume maximum life and service. And this *extra* pride of workmanship means no premium in price. What's more, Roebling Technical Service—based on generations of practical experience—is always freely available to help you get the *most* from the Roebling products you use.

Next time—take the headaches out of the job by specifying *Roebling* all the way! For Roebling *extra-quality* wire and cable see your Roebling Distributor or write: Electrical Wire Division, John A. Roebling's Sons Corporation, Trenton 2, New Jersey.

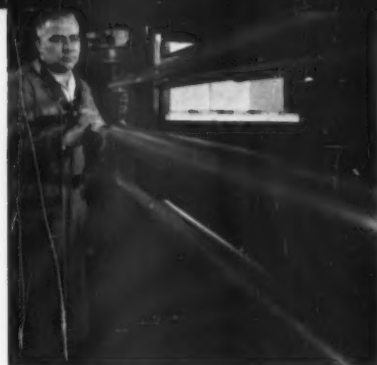
**ROEBLING**   
Branch Offices in Principal Cities  
Subsidiary of The Colorado Fuel and Iron Corporation 



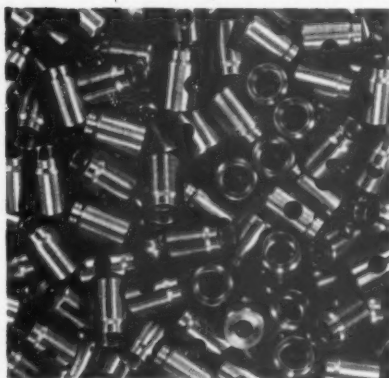
**ALL KINDS OF SHAPES AND FORMS** can be machined from J&L cold finished steel bars. Masco Screw Products Co. makes more than 300 different products for the automotive, aircraft and air conditioning industries.



Detroit's Masco Screw Products Company uses round, square and hexagonal J&L leded steel bars in sizes from  $\frac{3}{8}$ " to  $1\frac{1}{8}$ "



More than 96 automatic screw machines are in almost constant operation



Production runs vary from less than 10,000 to more than 2,500,000 pieces



Even complex machining operations have fewer work stoppages with free machining J&L leded steel



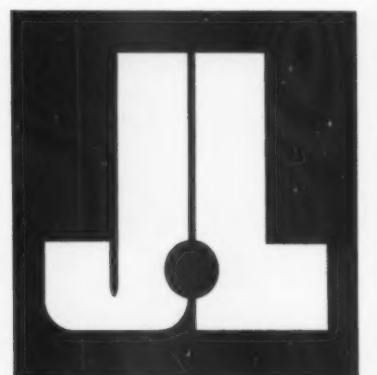
Parts are often so smooth after routine machining that no further finishing is necessary



Rigid Masco inspection procedures assure products of dependable quality



Masco regularly handles specifications calling for dichromate, chromium, and other protective coatings



## "J&L leded steel bars machine at maximum practicable speeds for screw machines"

*... reports Masco Screw Products Company*

"While we're seldom able to run our automatic screw machines at their maximum rated speeds, we've found that J&L leded steel bars permit the fastest machining speeds practicable," says Alex Wood, plant engineer of Masco Screw Products Company, Detroit's largest independent manufacturer of screw machine products.

"The free machining properties of this J&L cold finished steel permit high speed production. The short length chips minimize tool edge build-up. Tool wear is reduced. And, frequently, fewer finishing operations are needed.

"This is a good steel for screw machine products."

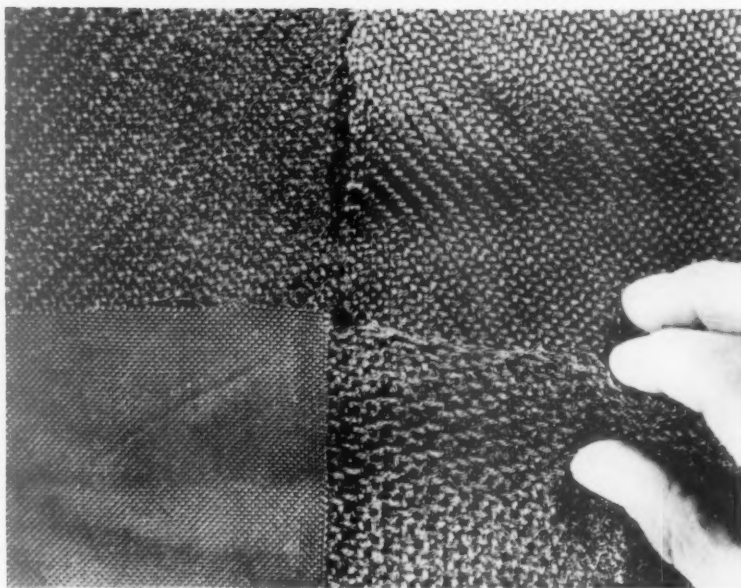
**Jones & Laughlin Steel Corporation**

PITTSBURGH, PENNSYLVANIA

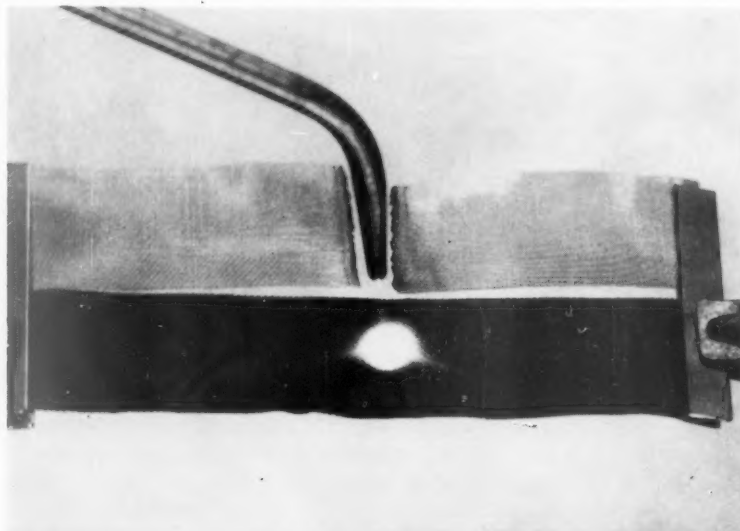
*Where cold rolled steels originated in 1859*

## Products and Ideas

### Graphite Is Produced In Flexible Textile Form



Many textures of graphite fibers and fabrics can be manufactured. Here are four weaves of graphite cloth now being produced experimentally.



A torch test shows graphite's high temperature advantages. The stainless steel strip melts under the flame, while there is an absence of melting on the graphite cloth strip.

**M**ANUFACTURED graphite, useful for many industrial applications, is now being produced in flexible fiber and fabric form. A new process converts organic textile forms directly to graphite with a purity in excess of 99.9%.

Any textile form can be produced in this material. In the production process, a fiber or fabric—such as rayon—is graphitized by electrically heating it to a temperature close to 5400 degrees F. The crystalline structure of the material is changed to that of graphite in this conversion.

#### **No Melting Point**

One of the advantages of graphite is that it has no melting point at ordinary pressures. It goes directly from a solid to a vapor state only at extremely high temperatures—approximately 6600 degrees F.

Another unusual property: it gets stronger at higher temperatures. Its tensile strength at 4500 degrees F. is about twice that at room temperature.

Graphite textiles are resistant to attack by acids, alkalis, and organic compounds, except for those of a highly oxidizing nature. They also have excellent electrical and thermal conductivity.

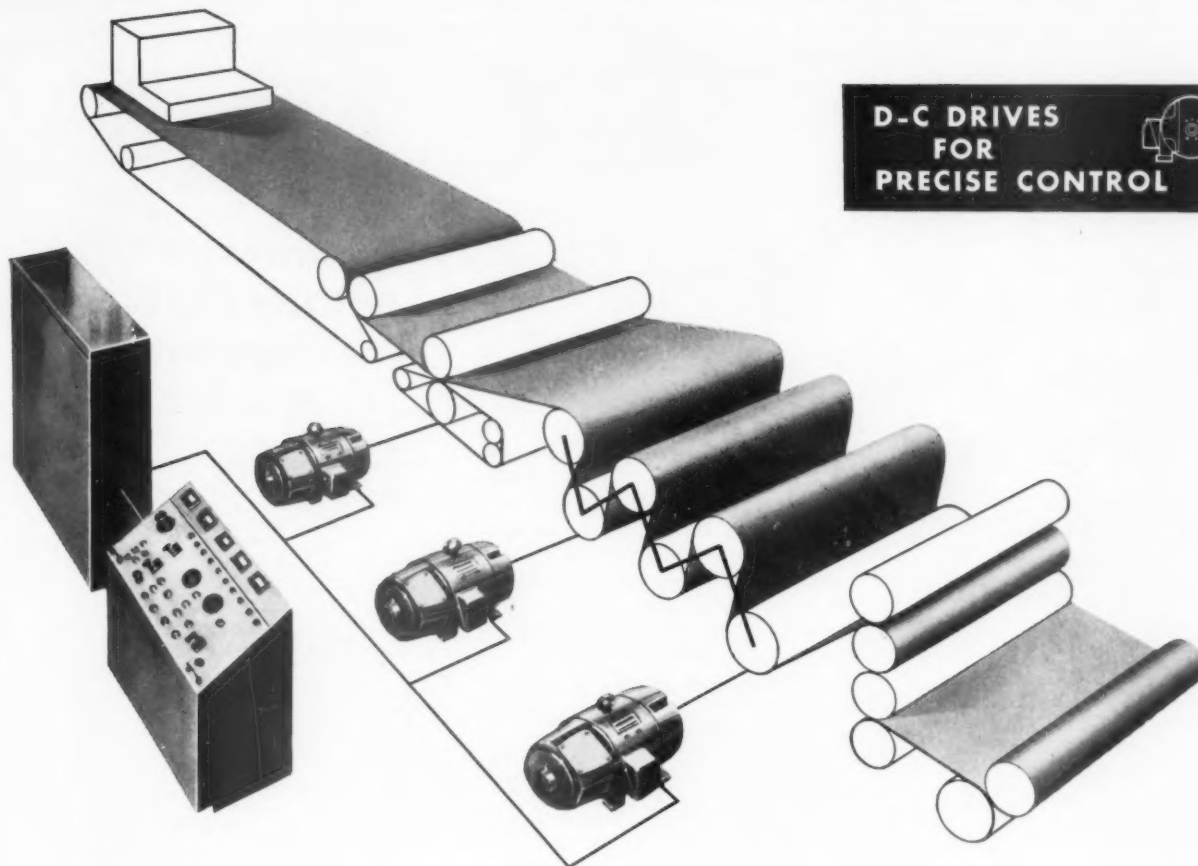
#### **Many Applications**

The graphite fibers and fabrics can be used to impart this conductivity to non-conducting materials, like plastics, ceramics, and glass cloth. Refractory materials, too, are potential uses for graphite cloth. Other applications are found in the chemical, electrical, electronic, and mechanical industries.

Manufacturer of graphite fibers and fabrics is National Carbon Company, a division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N.Y.

For More Information Write No. 207  
on Inquiry Card—Page 36→  
**PURCHASING**





**D-C DRIVES  
FOR  
PRECISE CONTROL**

## **Problem: How to coordinate two or more machines for greater production flexibility, lower costs**

Operating at high speeds, working to close tolerances, meeting high-quality standards, today's machines must be controlled accurately. This is one of the reasons users and designers are making greater use of direct-current drives for coordinating two or more machines in multi-section process lines.

**MACHINE COORDINATION IS A NATURAL JOB FOR DIRECT-CURRENT POWER.** For direct current can best provide the accurate speed matching and extra measure of control needed for high-speed, automatic continuous processing.

D-c's flexibility allows each individual drive motor to be run at the exact speed demanded by the section

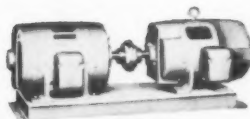
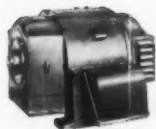
of the process it drives. Increased output, better quality control and production flexibility lower the cost per unit of production.

To learn more about the modern capabilities of direct-current power, write for your free copy of "WHY D-C?", Section 829-3, General Electric Company, Schenectady 5, New York.

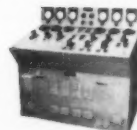
*Progress Is Our Most Important Product*

**GENERAL  ELECTRIC**

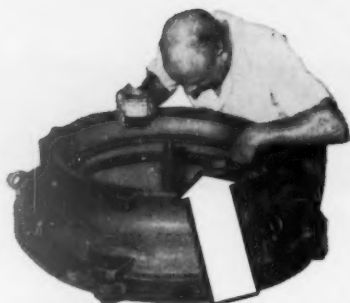
**SELECT FROM GENERAL ELECTRIC'S COMPLETE LINE OF D-C DRIVES**



**MOTORS AND GENERATORS**



**POWER UNITS AND CONTROLS**



## Plastic Steel® saved over \$1000...plus days of downtime for MARRINER

A broken centrifuge at Marriner Combing Company stopped production on an important order. PLASTIC STEEL was used for on-the-spot repairs and the machine was back in operation within an hour at a cost of less than \$5.00. Using conventional repair methods would involve several days and cost over \$1000.

Hundreds of companies have saved time and money by repairing worn machine parts, cracked castings, leaking hydraulic systems and tanks, rebuilding worn pumps or valves, etc., with PLASTIC STEEL®.

PLASTIC STEEL® and other Devcon products are used for making jigs, fixtures, metal-forming dies, plastic and rubber molds, foundry patterns and core boxes, and other industrial tools.

PLASTIC STEEL® — as easy to use as modeling clay — hardens to steel-like strength in 2 hours . . . can be machined with regular tools. Bonds all metals, wood, glass, concrete, etc. to itself or each other. Extremely high tensile, compression, impact strength — excellent chemical resistance.

Find out how PLASTIC STEEL® and other Devcon products can save time, cut maintenance costs and speed production in your plant — write for FREE bulletin today.

Distributed nationally by leading industrial suppliers



65 ENDICOTT STREET, DANVERS, MASS.  
For More Information Write No. 208  
on Inquiry Card—Page 36

## Products

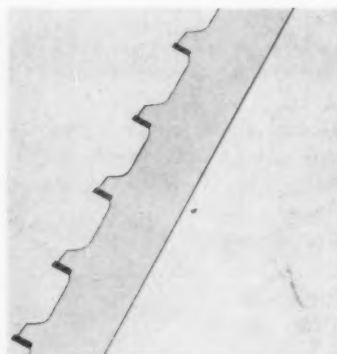
### Fast-Fitting Frames for Safety Goggles



Custom-fitting safety goggle frames will accommodate plastic, glass or prescription lenses. Among features of new frames are: temples which wear telescopes in or out for perfect fit; universal nosebridge which rests comfortably on any shape nose; sixty-second lens replacement. Available with or without side shields, frames are sturdily constructed, lock lenses firmly into place. Choice of colors, and may be had with plastic or hardened safety glass, clear or green. Watchemoket Optical Co., Inc., 232 W. Exchange St., Providence 3, Rhode Island.

Write No. 18 on Inquiry Card—Page 36

### Carbide-Tipped Saw for Abrasive Materials



A carbide-tipped saw is available for tempered foam glass, carbon blocks, ceiling insulation, corrugated paper board, cork and other abrasive or hard-to-cut materials. The new saw reduces cutting costs, in some instances out-performing other cutting methods by as much as four to one. Atkins Saw Division, Borg-Warner Corp., Indianapolis 9, Indiana.

Write No. 19 on Inquiry Card—Page 36



## drives out MOISTURE and prevents RUST

RUST AND CORROSION COST AMERICAN  
INDUSTRY OVER \$8,000,000,000 ANNUALLY

SPRA-DRI is a revolutionary water displacing chemical (working on molecular displacement—Pat. No. 2647839)—and can be used safely on land and marine equipment, precision materials, all motors and machinery—anything subject to corrosion, moisture, or condensation. SPRA-DRI penetrates below damp or wet surfaces, creeping into pores and crevices, displacing and driving out water or moisture, leaving a microscopic, molecular film which is transparent, water repellent, and rust preventive. SPRA-DRI controls detrimental mist and moisture on Ferrous and Non-Ferrous metal, and controls all rust and corrosion due to condensation. Laboratory tested and approved, SPRA-DRI is used by the Thiokol Corporation, Southern Minerals, Abercrombie & Fitch, Central Power and Light, U. S. Army, U. S. Navy, and other companies that recognize SPRA-DRI as the best solution to rust and corrosion problems. Meets and exceeds Federal Specifications MIL-C-16173A(3). There is nothing on the market having equal characteristics. SPRA-DRI is not an oil or a plastic. 12 oz. aerosol can \$39.40 per case list. Commercial discount available. Further pertinent information on request. BERGMANN ENTERPRISES, LTD., 215 North Flores Street, San Antonio 5, Texas.

For More Information Write No. 209  
on Inquiry Card—Page 36

**FINEST IN THE NORTHWEST**

**Hotel Capri**

250 modern rooms from **\$350** (includes Free Parking!)

Maurice J. Blum  
Managing Director

**LUXURIOUS ROOMS AT SENSIBLE PRICES**

Heart of Downtown. Next door to the shopping center and best theaters. Few steps from Municipal Auditorium.

Good Food . . . Banquet Facilities . . . Free Parking COME AS YOU ARE

7th and Webster Sts.,  
in the Center of

**ST. PAUL, MINN.**

For More Information Write No. 210  
on Inquiry Card—Page 36

**PURCHASING**



# 85+30+1 = Better Service for you !

So that you can get superior service, prompt attention and quick delivery on USS Cyclone Industrial Wire Cloth, Cyclone Fence maintains a nation-wide network of 85 sales offices, 30 warehouses and a manufacturing plant. From any one of these 116 sources you can be sure that you will get the best possible service. Call any Cyclone office or warehouse nearest you—for prompt, sure service, localized and personalized to meet your needs.

USS Cyclone Industrial Wire Cloth is woven on Cyclone's new exclusive looms to exacting tolerances and specifications. From the thousands of different sizes, weaves, finishes and meshes, there is sure to be a Cyclone Industrial Wire Cloth

just right for you. To find out more about these Industrial Cloths, just send for our new free catalog. Use the coupon.

## Cyclone Industrial Wire Cloth:

Meshes vary from  $\frac{3}{4}$  inch to 24 wires per inch. Warp and shoot wires can be varied to provide rectangular spacing or panel and rib weaves. Wire gauges range from 14 gauge to 36 gauge. Wire cloth can be slit and cut to length according to your exact requirements.

• Plain Steel • Painted Steel • Hot Galvanized After Weaving • Electro Galvanized After Weaving • Amgal (Galvanized Before Weaving) • Stainless Steel • Aluminum • Commercial Bronze • Plastic Coated Steel

USS and Cyclone are registered trademarks

**Cyclone Fence Dept.  
American Steel & Wire  
Division of  
United States Steel**



Manufactured at De Kalb, Illinois  
Sales Offices Coast to Coast

**Cyclone Fence Dept., American Steel & Wire  
Z-69, 614 Superior Avenue, N.W.  
Cleveland 13, Ohio**

Please send me a free copy of your new catalog on USS Cyclone Industrial Wire Cloth.

Name .....

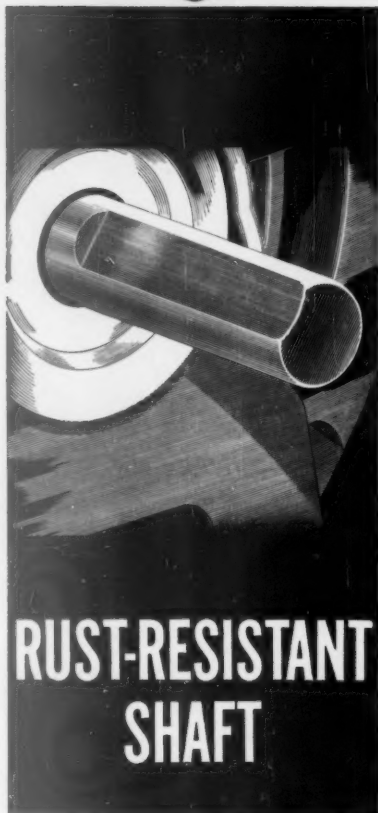
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**PURCHASING AGENTS...**

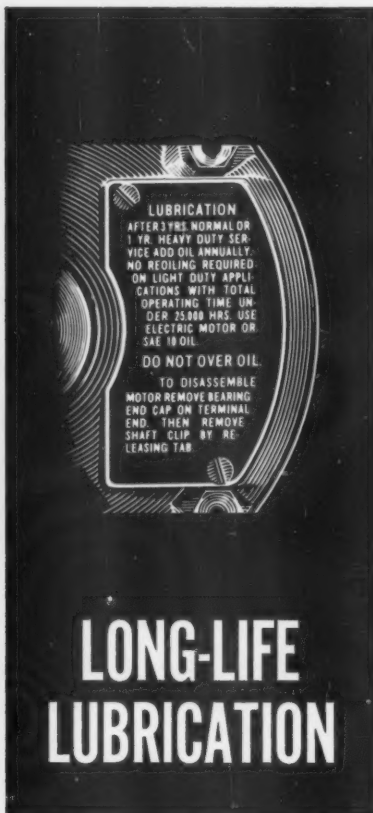
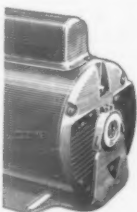
# RELIABILITY



## RUST-RESISTANT SHAFT

New protective shaft finish resists rusting, looks better, lasts longer

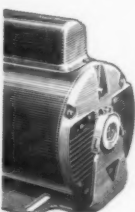
General Electric Form G motors feature a special gun-metal-like treatment of the shaft which resists rust and corrosion. Fans, pulleys, and couplings are easy to remove. Even endshield latches and hardware now are bright plated to last longer, look better. G-E Form G motors assure you the extra life and easy maintenance your customers want!



## LONG-LIFE LUBRICATION

Large oil supply and superb retention system cut maintenance

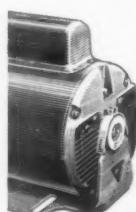
Form G motors require little reoiling and on some applications no reoiling at all. This results from a 50% larger oil reservoir plus a highly efficient method of retaining oil. (On G-E ball bearing motors, a special long-life grease gives up to 10 years' service without relubrication.) Another good reason for you to choose General Electric Form G's!



## ACCURATE ALIGNMENT

Sturdy, disk-type endshields assure accurate bearing alignment

General Electric Form G's feature disk-type endshields, heavily ribbed for high rigidity and long life. The rabbet and bearing are placed in the same plane and machined simultaneously to provide inherent bearing alignment. Form G endshields won't warp! Accurate, permanent alignment means longer bearing life and dependable motor operation.



GENERAL  ELECTRIC

GENERAL  ELECTRIC

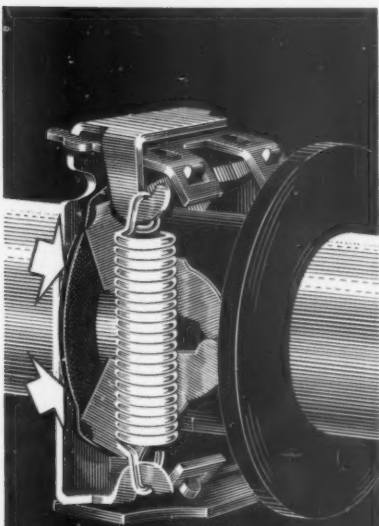
GENERAL  ELECTRIC

**JUST ASK YOUR GENERAL ELECTRIC SALES ENGINEER**



General Electric Form G motors provide field-proved

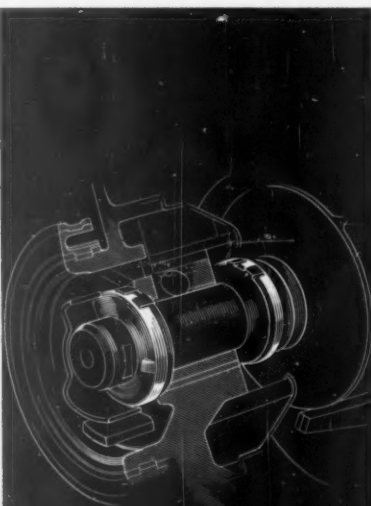
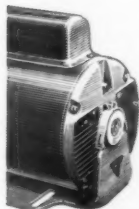
# YOU CAN COUNT ON



## QUIET, SURE SWITCH

Dependable centrifugal switch gives quiet, positive snap-action

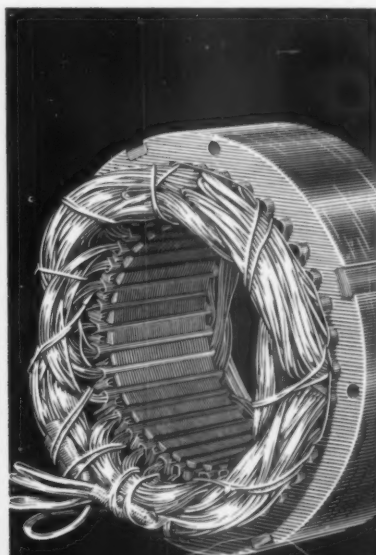
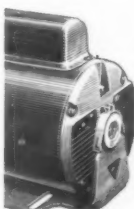
The centrifugal switch on Form G's is designed to stand up to heaviest demands (3,500,000 test operations). Add to this a switch that's quieter than ever. A carefully designed composition washer greatly reduces start-stop click without sacrificing positive snap action. Here's another Form G difference that means more satisfied customers for you!



## THRUST PROTECTION

Washer assembly absorbs thrust from any direction; contributes to longer life

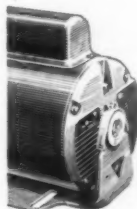
A specially-designed three-piece thrust washer assembly, keyed to rotate with the shaft, withstands normal thrust from any direction, regardless of motor angle. It also acts as an oil seal to help provide positive oil retention, contributing to longer lubrication life and reduced maintenance. If you're looking for a motor that's built to last, try Form G!



## LONG-LIFE STATOR

Heavy-duty bonding dip and stator clamps provide rigid, uniform assembly

Along with the Mylar\*-Formex\*\* insulation system pioneered by G.E., you now get a new bonding treatment on Form G motor stators. It affords added protection against stress. Stator cores are now specially clamped for highly accurate alignment. These new features result in extra rigidity, more uniform quality. Here's longer motor life!



\*Reg. trade-mark, DuPont Co.  
\*\*Reg. trade-mark, G.E. Co.

702-94

GENERAL  ELECTRIC

GENERAL  ELECTRIC

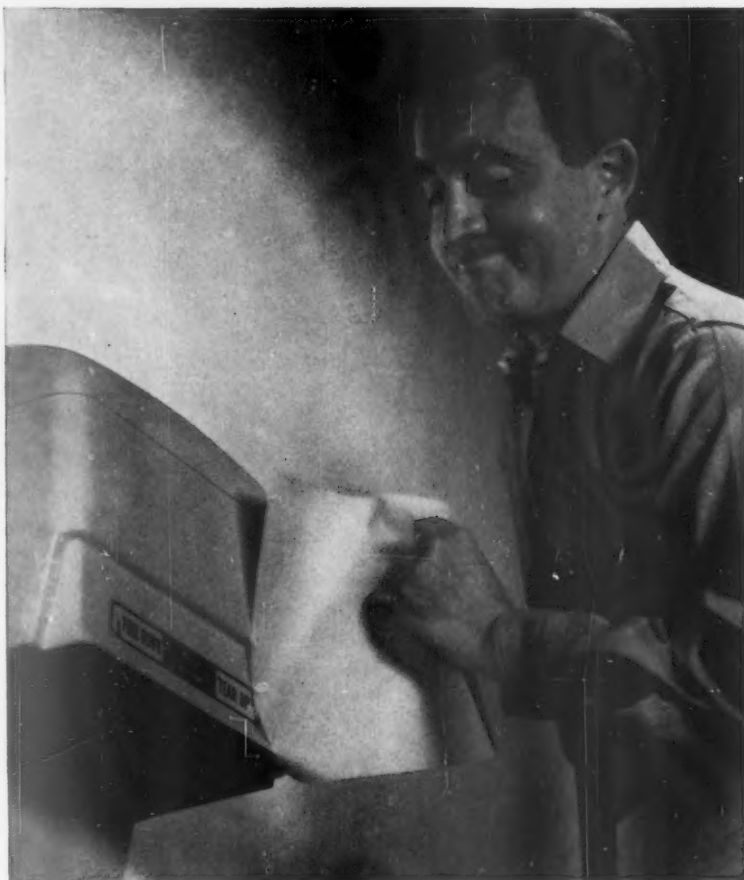
GENERAL  ELECTRIC

ABOUT THE NEW FORM G "EXTRA VALUE" FEATURES

JUNE 22, 1959

For More Information Write No. 211 on Inquiry Card—Page 36

101



*With Steiner controlled towels*  
**He's helping cut waste 20%**

Paper towel expenses getting high? You can cut towel waste with a Steiner controlled roll paper towel dispenser. Here's how: User pulls from the cabinet only the amount of toweling he needs . . . no grabbing of a handful of towels that aren't needed, half used and then discarded. Still, user gets plenty of towels for thorough drying job. You can save 20% or more in towel costs with Steiner controlled dispensers.

Install them on a trial basis and see how you save. For more information contact your janitorial supplier or sanitary paper distributor or write Steiner Company, 740 Rush Street, Chicago 11, Illinois.



**STEINER COMPANY**

740 RUSH STREET, CHICAGO 11, ILL., DEPT. C-6

Please send me free bulletins on Steiner controlled roll paper towel dispensers.

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

For More Information Write No. 212 on Inquiry Card—Page 36

**Products**

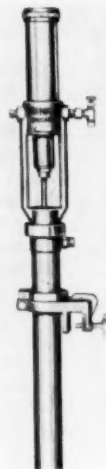
**Tool for Checking  
Radial Friction**



A dial indicator-type torque tool has been introduced by the Apco Mossberg Co., 1002 Lamb St., Attleboro, Mass., to simplify the checking of radial friction in assembled bearings, pillow blocks, turnbuckles, eccentric bearings, etc. Radial friction torque tool is 7-3/4 in. long and weighs only 7-1/2 oz. The plug O.D. is ground to size to suit the application, ranging from 1/4 in. to 1 in. O.D. Features are 2-5/8 in. O.D. balanced dial graduated in 12—0—12 inch-pounds, clear plastic crystal, white indicator pointer, and black dial with easy-to-read aluminum graduations.

Write No. 20 on Inquiry Card—Page 36

**Pump Eliminates  
Spillage and Waste**



A new stainless steel pump is designed for pumping materials direct from the original 55-gallon containers to point of application,

(Please turn to page 104)

# YOUR <sup>ELECTRIC</sup> TRUCK BATTERY

Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 20, Pa.



## WHAT! 87% MORE WORK CAPACITY? THIS TRUCK GOT IT WITH EXIDE-IRONCLAD

Can any truck really work two full shifts in succession, moving heavy loads, even up ramps? The one shown above has been doing it successfully for over a year . . . since being equipped with one of the new, more powerful Exide-Ironclad Batteries.

The truck is used to move heavy loads of wood at the State Box Company, Sacramento, Calif. It was purchased originally to work one shift, entirely indoors. But increased production called the truck into service outdoors too. This meant moving up and down ramps such as you see in the picture.

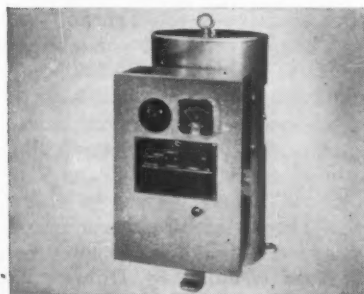
The original battery had a capacity of 500 ampere-hours and fitted into the compartment with room to spare. This was plenty of power for one shift operation, but not enough for the two shifts frequently required during rush seasons.

The new Exide-Ironclad Battery packs 936 ampere-hours and still fits into the same compartment. These more powerful batteries are available in sizes for every electric industrial truck. You get more work capacity . . . more power per dollar.

For more details on the new Exide-Ironclad Batteries, write for a copy of the 8-page, illustrated brochure #6230.



**50 years . . . never matched.** Exide first patented the tubular positive plate battery in 1909. Today Exide-Ironclad is still unmatched for power, life and economy. Improvement has been constant. And now new materials and construction advances put it farther ahead than ever.



### EXIDE CHARGERS SAVE YOU MONEY TWO WAYS

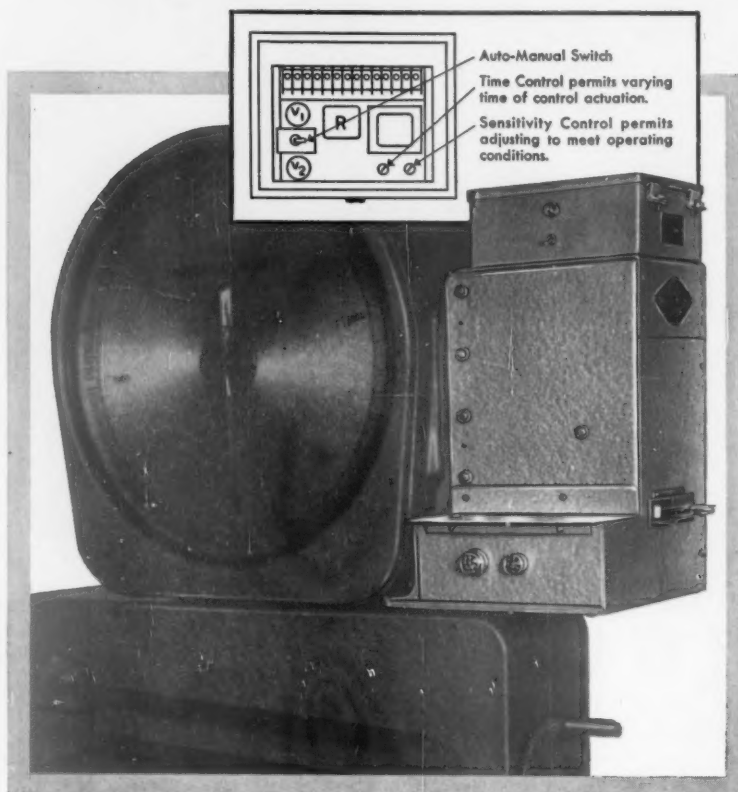
You actually get more charging capacity for the price in these vertical chargers now offered by Exide. Simplified, standardized construction reduces the cost of components, and savings are passed on to you. You also save on upkeep. Clean cooling air is drawn in at the top. So there's less dirt accumulation. Oversize bearings last far longer. In addition, the vertical design saves two-thirds of the

floor or shelf space needed for mounting. Write for the new brochure giving complete information.

# Exide®

# NEW Fairbanks-Morse

## Electronic Weight Detector



### Prevents incorrect weighing . . . stops costly errors!

With the new Electronic Weight Detector, true weight of any load can be automatically obtained and recorded without need of a weighman. Where a weighman is used, it is impossible for him to record incorrect weights or start a sequence at the wrong time. When desired, a flip of the switch can disengage the Weight Detector entirely from the system. *This is the first fully-reliable control of its*

*kind available in the scale industry.*

To completely automate your weighing—to be sure that your weights are correct—to protect yourself by completely policing your entire weighing operation—contact your nearby Fairbanks-Morse Field Engineer, or write directly to Fairbanks, Morse & Co., 600 South Michigan Ave., Chicago 5, Illinois for complete information.

See Sweet's Plant Engineering File for full line of F-M Scales



## FAIRBANKS-MORSE

a name worth remembering when you want the BEST

SCALES • PUMPS • DIESEL, DUAL FUEL AND GAS ENGINES • ELECTRIC MOTORS  
GENERATORS • COMPRESSORS • MAGNETOS • HOME WATER SYSTEMS

For More Information Write No. 214 on Inquiry Card—Page 36

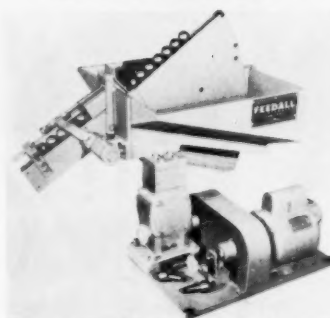
## Products

(Continued from page 102)

without spillage and waste. Air-operated, reciprocating-type pump solves problem of handling fluids that might be contaminated, such as pharmaceuticals, dyes, inks, soaps, ammonias, alcohol, latex, acids and many corrosive liquids. Weighing less than 20 lbs., unit has complete separation of air motor and pump sections, delivers from 3 to 5 gallons of material per minute. Air motor piston cups are self-oiling, and pump delivers on both up and down strokes. Available in seven models with various accessories for use with a variety of materials. Binks Manufacturing Co., 3122 Carroll Ave., Chicago, Illinois.

Write No. 21 on Inquiry Card—Page 36

### Automatic Feeder for Headed Parts



A new model feeder is designed for automatic and continuous feed, transfer or assembly of headed parts. Electrically controlled, feeder has variable speed from 10 to 20 strokes per minute. Machine handles sliding parts of 1/8 in. to 1 in. in diameter and from 1 in. to 4 in. long; headed work of same diameters from 1/2 in. to 3 in. long. Hopper capacity is 1-1/2 cu. ft. Easily portable, new model is only 19 in. high and 18 in. x 28 in. overall. Power is self-contained, using a 1/4 hp 220/440-volt 3-phase motor. Flexible features, including automatic bank control devices, are available without special designs, and an over-load safety system is built in to protect moving parts from damage. Feedall, Inc., 38399 Pelton Road, Willoughby, Ohio

Write No. 22 on Inquiry Card—Page 36





## ANCOR FLOOR PLATES BY WHEELING



You always get safe, long-lasting industrial floors with Ankor Floor Plates. Made of die-punched rolled steel, Ankor Plates are specially designed to provide 33 concrete safety islands per square foot!

What's more, 53 anchors *permanently bond* each Ankor Plate to the concrete base. This cuts mainten-

ance costs...and helps assure the best floor possible.

Get the full details on easy-to-install Ackermann Ankor *Rolled Steel* Floor Plates from your nearest Ackermann representative, or by writing Ackermann Manufacturing Company, subsidiary of Wheeling Steel Corporation, Wheeling, West Virginia.

**IT'S WHEELING STEEL!**

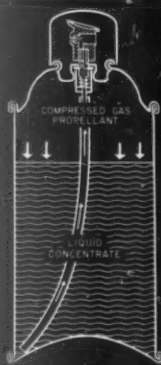
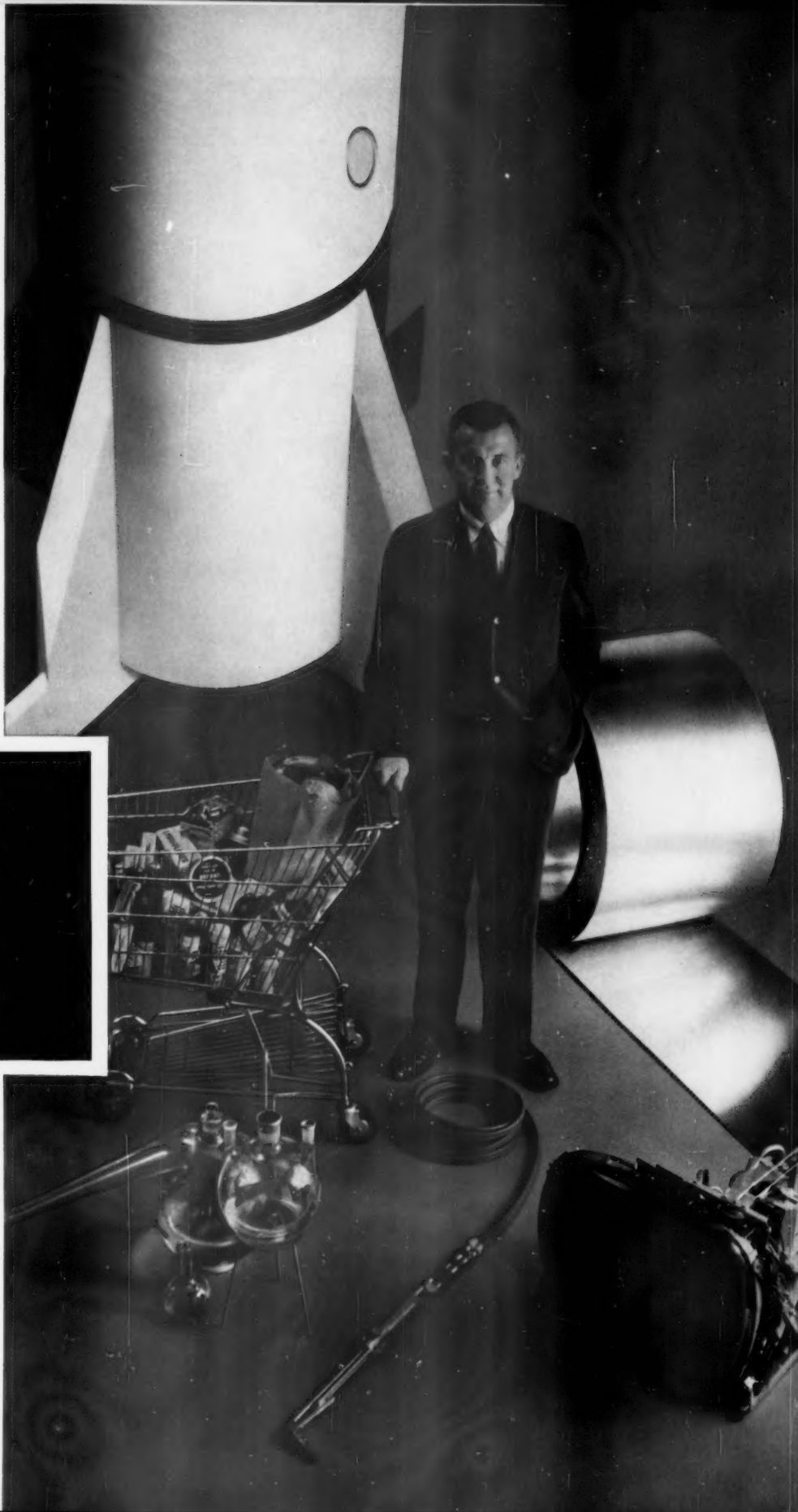
Ackermann Representatives at: Cincinnati, Detroit, Indianapolis, Milwaukee, Nashville, New York, St. Louis

For More Information Write No. 215 on Inquiry Card—Page 36  
JUNE 22, 1959

For More Information Write No. 216 on Inquiry Card—Page 36→

# AIRCO INDUSTRIAL AND RARE GASES

ARGON  
OXYGEN  
ACETYLENE  
NITROGEN  
NITROUS OXIDE  
HYDROGEN  
CARBON DIOXIDE  
HELIUM  
XENON  
KRYPTON  
NEON



THE ANATOMY of a typical aerosol involves (1) a gastight steel, aluminum, clad-glass or plastic container; (2) a manually-operated valve, usually with a dip tube; and (3) a propellant under pressure to force the product up and through tube and valve.

# PART OF THE PICTURE

## at ATI as aerosol production soars—

# AIRCO INDUSTRIAL GAS SERVICE

In the very near future, a billion aerosol units a year will be marching off the conveyor belts of custom and in-plant loaders. Well over 100 different products, under hundreds of brand names, are being dispensed by push button.

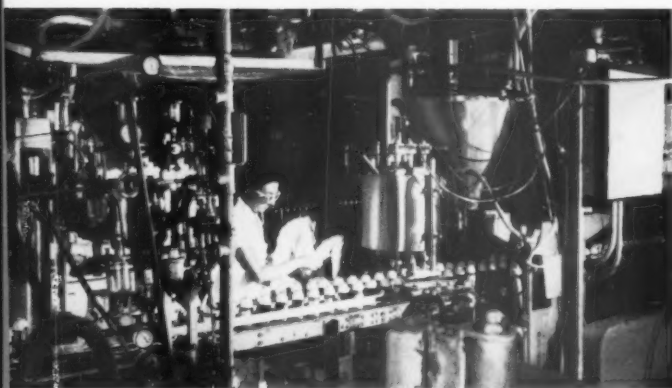
The most suitable and economical propellants for a substantial percentage of aerosols are the compressed gases—notably true for the host of pressurized foods and pharmaceuticals now under development.

Airco has been in the forefront of this booming business. With technical help, with supplies of high purity compressed gases—

NITROUS OXIDE—CARBON DIOXIDE  
and now  
NITROGEN—ARGON

AMONG THE BUSIEST of the custom loaders is Aerosol Techniques, Inc., at Bridgeport, Conn. Production processes, originally worked out with Airco, now enable ATI to handle up to 400,000 units a day. Here's how ATI cycles a compressed gas aerosol:

Prewashed cans travel on a magnetic conveyor like the one below. A six-spout filler charges cans with product. Operators insert the valves. Machine crimping comes next. Cans then move to the gassing heads.



GASSING HEADS charge cans with Airco high purity nitrogen, down through valve and dip tube, to a pressure of 50-100 psig., depending upon formulation. This is the pressurized gas that ultimately dispenses the product.

Electronic equipment then checks units to make sure each is gas-tight and pressure-right. Cycle time, which often includes labeling: about two minutes.

Airco also has pioneered the use of these gases in other areas of equal importance to—and often related to—packaging, blanketing, purging, quick freezing, chilling, hydrogenation, and carbonation.

If your plans include products in pressure packages—or product improvements of any kind where gases can serve—call in your nearby Airco Engineering Service Representative. Airco offers you unexcelled technical facilities for adapting your products to compressed gases, plus a source of supply widely known for its dependability.



RESEARCH AND DEVELOPMENT LABS of ATI, where Airco's long experience with industrial gases and gas equipment serves ATI in its enlarged program to develop new inhalation therapy aerosols, pressurized vitamins, antibiotics and other products.

THE NITROGEN INSTALLATION. Here, too, Airco is part of the picture. For Airco has tailored this installation to ATI needs, backed it up with stand-by cylinders and the Airco Dealer's nitrogen "bank" of more than 100 cylinders.

Why Airco? Because Airco is near at hand, supply is certain, and competent technical personnel is on call at all times.

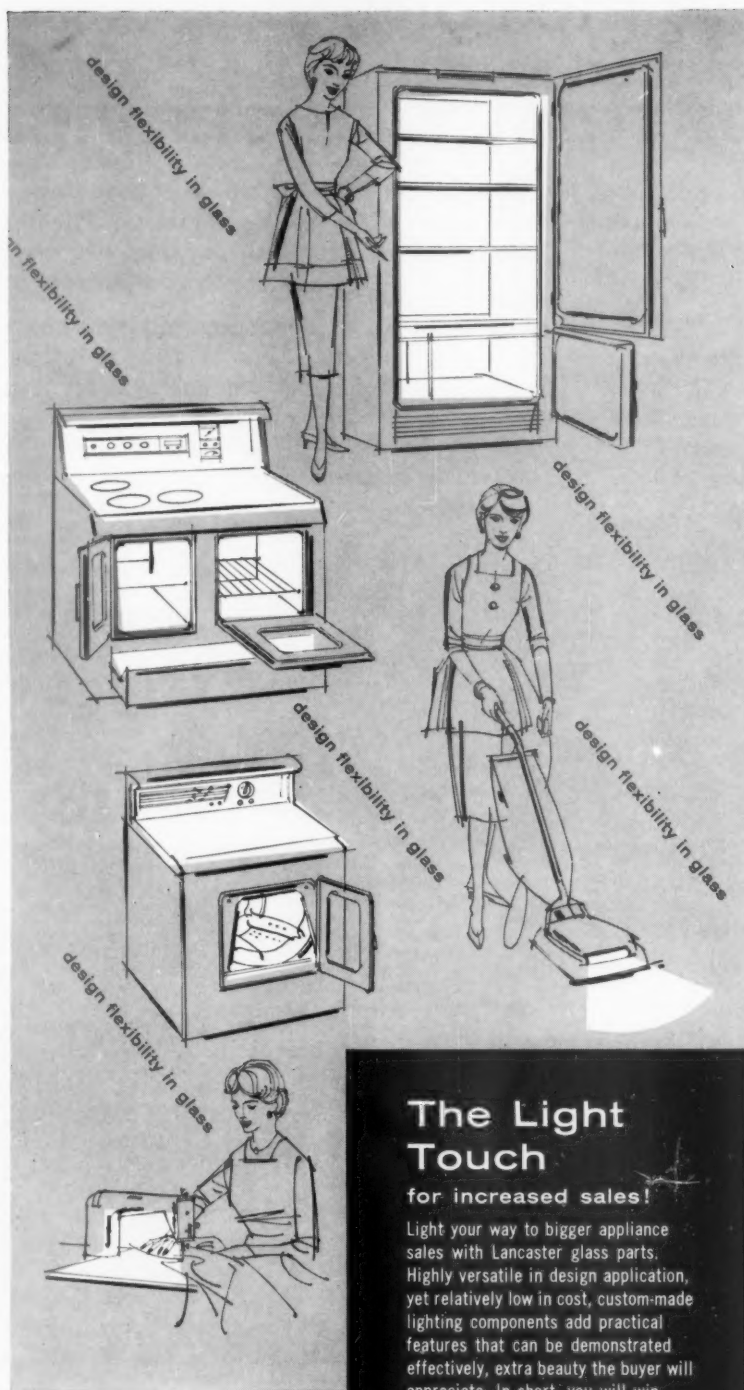


## AIR REDUCTION SALES COMPANY

A Division of Air Reduction Company, Incorporated  
150 East 42nd Street, New York 17, N. Y.

Offices and dealers in most principal cities • On the west coast—Air Reduction Pacific Company • Internationally—Airco Company International • In Cuba—Cuban Air Products Corporation • In Canada—Air Reduction Canada Limited • All divisions or subsidiaries of Air Reduction Company, Inc.

AT THE FRONTIERS OF PROGRESS YOU'LL FIND AN AIR REDUCTION PRODUCT • Products of the divisions of Air Reduction Company, Incorporated, include: AIRCO—industrial gases, welding and cutting equipment • AIRCO CHEMICAL—vinyl acetate monomer, vinyl stearate, methyl butynol, methyl pentynol, and other acetylenic chemicals • PURECO—carbon dioxide—gaseous, welding grade CO<sub>2</sub>, liquid, solid ("DRY-ICE") • OHIO—medical gases and hospital equipment • NATIONAL CARBIDE—pipeline acetylene and calcium carbide • COLTON—polyvinyl acetate, alcohols, and other synthetic resins.



## The Light Touch

for increased sales!

Light your way to bigger appliance sales with Lancaster glass parts. Highly versatile in design application, yet relatively low in cost, custom-made lighting components add practical features that can be demonstrated effectively, extra beauty the buyer will appreciate. In short, you will win friends and influence prospects at the vital point-of-sale.

Our lighting engineers can help you create new product applications, assist you with special assembly, optical or engineering problems. Put this expert knowledge to work for you, write Lancaster Glass Corporation, Lancaster, Ohio, or call OLive 3-0311.

## Products

### Variable-Volume, Vane-Type Hydraulic Pump



A new, variable delivery 5 gpm vane type hydraulic pump is offered for industrial applications. Pump includes an integral pressure compensator which controls volume at preselected adjustable pressures. New unit limits its delivery to system demand. Pressure compensation can be varied from 200 to 1,000 psi. Sharp cut-off characteristics enable pump to deliver nearly full volume up to the compensator setting even at low operating pressures. Variable volume and pressure compensation features eliminate need for relief valve and attendant piping. Ideal as fluid power source for varying volume demand circuits. Nominal 5 gpm rating is at 1800 rpm. Available for flange, foot, or gasket mounting. Vickers Inc. (Division of Sperry Rand Corp.), Detroit 32, Michigan.

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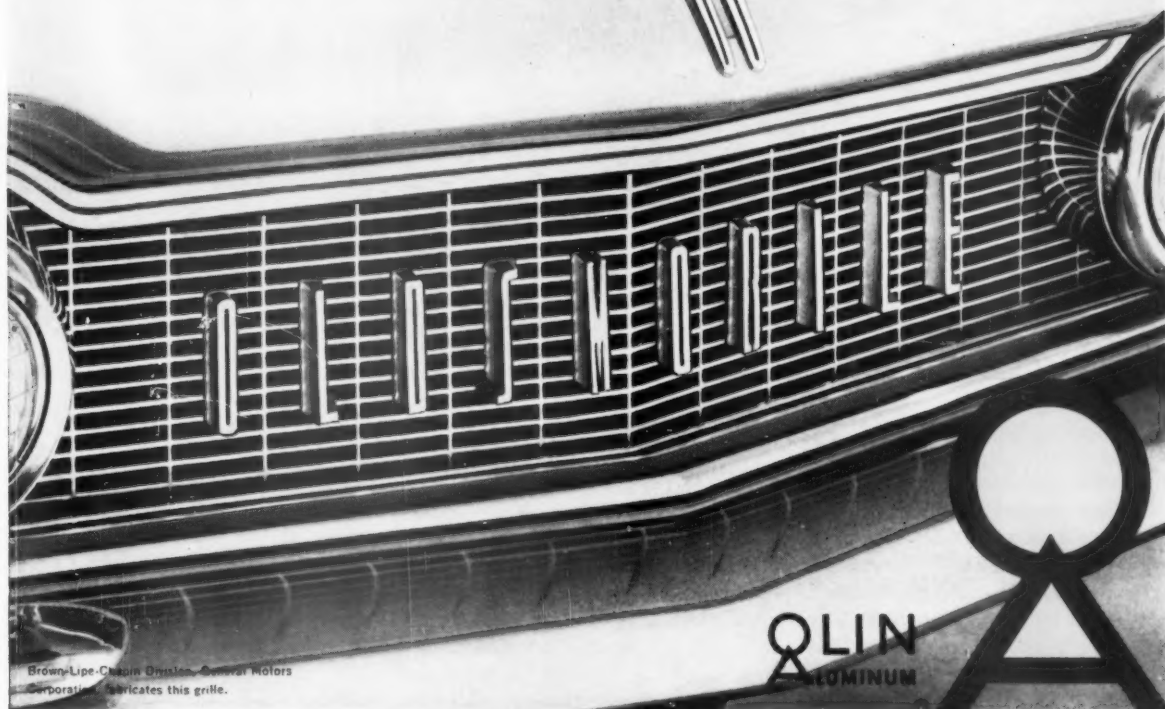


"You in the back row there, what's so funny? . . ."

For More Information Write No. 217 on Inquiry Card—Page 36



OLIN  
ALUMINUM  
GLISTENS  
ON  
AMERICA'S  
FINE  
CARS



Brown-Lipe-Chapin Division, General Motors Corporation, fabricates this grille.

**OLIN**  
ALUMINUM

**OLIN** MATHIESON, METALS DIVISION, 400 PARK AVENUE, NEW YORK 22, NEW YORK.

JUNE 22, 1959

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Photograph by Bruce Davidson

## LARRY DUNN PUTS METAL ON SKYLINES

Before most architects even dreamed of buildings decked in bright blue or green or gold, Larry Dunn had them towering on the skyline in his mind's eye. But by 1948, he could point to half a dozen . . . by 1954, more than 100. Today, the number exceeds 600 and keeps growing.

It is not enough that aluminum-clad skyscrapers go up faster at lower cost,

or even that they defy corrosion to keep maintenance negligible. What counts most is that, as a member of the Alcoa Development Division team, Larry Dunn helped put the color, form and texture of aluminum into the hands of architects. With this new-found freedom from the tyranny of brick and stone came stirring revolutions in the architectural designs for buildings of all

kinds, both commercial and industrial.

Because Alcoa has people like Larry Dunn to put unequalled resources for sales development at your command, you get extra value in every pound of Alcoa® Aluminum you buy. The added value of their services starts when you call your local Alcoa sales office. Aluminum Company of America, 2017-F, Alcoa Building, Pittsburgh 19, Pa.



**ALCOA** *helps you design it, make it, sell it*



## Alcoa has hundreds of Larry Dunns to help you design it, make it, sell it

All of Alcoa's skills are mobilized to a single purpose: To put more than just 16 ounces of metal in every pound of Alcoa Aluminum you buy. Here are 12 of the dozens of ways to do it:

1. **Research Leadership**, bringing you the very latest in aluminum alloys and applications.
2. **Product Development** by specialists in your industry and your markets.
3. **Process Development Labs** for aid in finishing, joining and fabricating.
4. **Service Inspectors** to help solve production problems at your plant.
5. **Quality Control** to meet top standards or match your special needs.
6. **Complete Line** including all commercial forms, alloys, gages, tempers.
7. **Availability** via the nation's best stocked aluminum distributors.
8. **Foremost Library** of films and books to help you do more with aluminum.
9. **Trained Salesmen** with a wealth of on-the-spot information.
10. **Sales Administrators** constantly on call to service your orders.
11. **Year-Round Promotions** expanding your old markets, building new ones.
12. **The Alcoa Label**, leading symbol of quality aluminum, to mark your goods.

### Added Values With Alcoa Aluminum



... is a case book of Alcoa special services and a guide to their availability in design, manufacture and sales. Your copy, with some of the most rewarding information you may ever read, is waiting and it's FREE. Write: Aluminum Company of America, 2017-F Alcoa Building, Pittsburgh 19, Pa.

For More Information Write No. 219  
← on Inquiry Card—Page 36  
JUNE 22, 1959

## Products

### New Articulated Band Machine



The DoAll Company of Des Plaines, Ill., has announced a new articulated band machine. It handles large or ungainly work with ease by moving the cutting tool and provides over 99 sq. ft. of unlimited cutting area and straight-cut length of 17-1/2 ft. Of special design, the machine shapes and forms large parts rapidly and economically, cutting them from the solid if desired. Model 5 has tool speed range from 25 to 5000 fpm; saw bands from 1/4 in. to 1 in. wide can be used.

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### Golden Thief "Steals" Samples

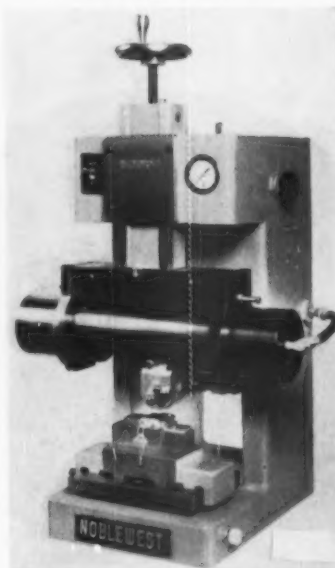


The Golden Thief vacuum pump draws pure samples of liquids and some powdered solids from tanks, drums, crankcases, and many inaccessible places. Convenient, clean, and safe, it has many applications including: sampling liquids that stratify at various

depths, hydraulic oils, electrolytic solutions, etc.; checking cooling solution; transferring acids safely; removing water from fuel tanks economically; and filling water to proper level in storage batteries of any size. Easy-to-clean models to screw on bottles from 1 oz. to 1 gal. (20 to 38 mm neck threads), and on cans from 1/4 pint to 5 gals. (5/8 in. to 1 3/4 in. caps). Aluminum, brass or stainless steel. 1 1/4 in. round by 7 in. long; weight six oz. for aluminum, 16 oz. for brass and stainless steel. W. & W. Mfg. Co., P.O. Box 9311, Chicago 90, Illinois.

Write No. 25 on Inquiry Card—Page 36

### Bench Model Marking Machine



A versatile and compact bench model marking machine with all-pneumatic operation is now being offered. Incorporating features of larger floor models, new model is ideal for marking round, flat, or irregular pieces. Machine is comparable to an air or hydraulic press, and marking process produces permanently indented inscriptions, with depth of mark pre-set and with machine cycle initiated by single hand or foot control. Operating pressure range from 25 to 100 lbs. Width, 11 1/4 in.; depth, 15 3/4 in.; height, 24 in. Noble and Westbrook Mfg. Co., Westbrook St., East Hartford, 8, Connecticut.

Write No. 26 on Inquiry Card—Page 36

# VALUE ANALYSIS IN ACTION

## Abrasive costs cut 18 to 1 at

If you buy any quantity of coated abrasive belts, this case history is likely to be of special interest to you.

At the Harrisburg Works of Thompson Ramo Wooldridge, coated abrasive belts were used in a semi-finishing operation in which the gripper die marks were ground off jet turbine blades. They were, that is until Abrasive Control Engineer Paul Mazich started checking up on costs.

They seemed unnecessarily high to Mazich and he called in Bay State Abrasive Engineer Allen B. Hughes who went to work on the problem and gave it the kind of searching value analysis that he'd been accustomed to in working with Purchasing Executives and Production people at other plants.

The result was a grinding wheel that cut the annual cost of abrasive materials alone from \$18,000 to \$1,000. Its unique combination of special bond and abrasive grit increased cutting speed, prevented loading and eliminated the need for dressing so successfully that productivity rose, labor costs dropped and there were additional savings of around \$5,000 a year.

Like Allen Hughes, the Bay State Abrasive Engineer in your area is a trained expert. He backs up the work of the experienced men who represent Bay State's topflight distributors and they are all ready to cooperate with the most stringent kind of value analysis program. *Better grinding at lower cost . . . that is their business.*



Industrial Engineer Paul Mazich examines finish on jet engine blade forging after off-hand grinding operation illustrated at right.



Operator E. S. Jones semi-finishes jet turbine blade in off-hand grinding operation with cool-cutting, self-dressing Bay State grinding wheel.



# Thompson Ramo Wooldridge



Allen B. Hughes worked up through Bay State's Westboro plant and then added extensive field experience so that his knowledge of abrasive problems and practical solutions for them covers every phase of abrasive engineering.

## BAY STATE ABRASIVES



Bay State Abrasive Products Co., Westboro, Massachusetts.

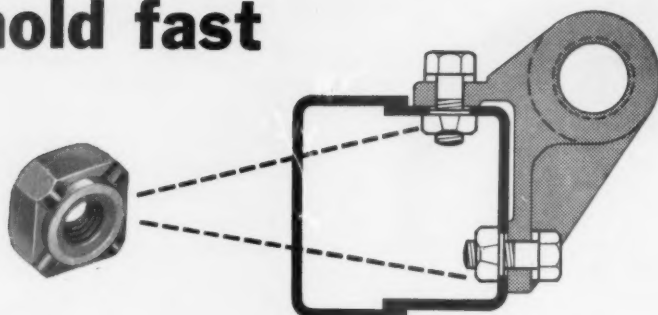
*In Canada:* Bay State Abrasive Products Co., (Canada) Ltd., Brantford, Ontario.

*Branch Offices:* Bristol, Conn., Chicago, Cleveland, Detroit, Pittsburgh, Los Angeles. *Distributors:* All principal cities.

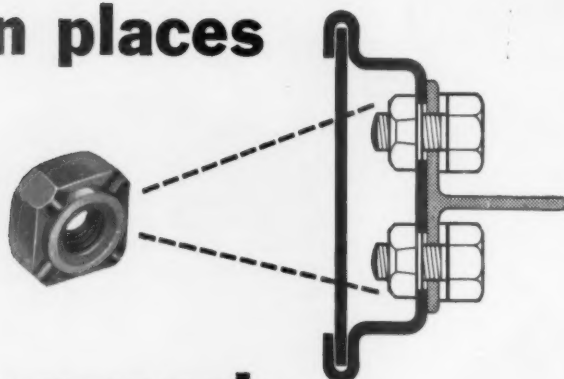
# MIDLAND

## WELDING NUTS

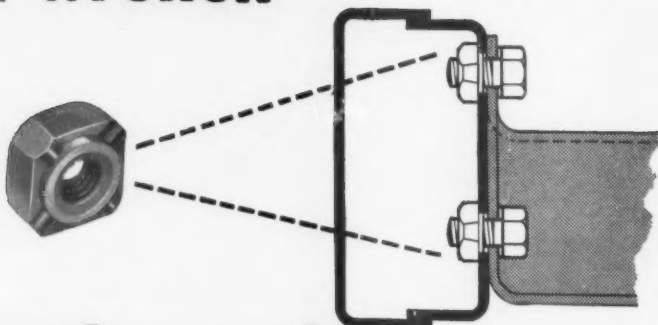
### hold fast



### in places



### a wrench



### can't reach

Looking for cost and time-saving tips? Send for the free booklet showing you how to "Save With Midland Welding Nuts."



**MIDLAND-ROSS  
CORPORATION**

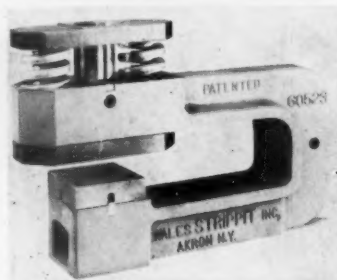
OWOSSO DIVISION • OWOSSO, MICHIGAN



For More Information Write No. 221 on Inquiry Card—Page 36

## Products

### Punching Unit with Dual-Range Capacity



A press-actuated hole punching unit is available which may be quickly altered from .250 to .750 capacity in mild steel by changing stripping mechanisms. Consisting of a single heavy-duty holder for both capacity ranges, unit has a readily removable punch assembly and two lift-out stripping springs. Changing springs takes only a few seconds and permits switch from lower capacity to heavier work, thus in effect giving an extra punching unit for the cost of the springs. Wales-Strippit Inc., 229 S. Buell Road, Akron, New York.

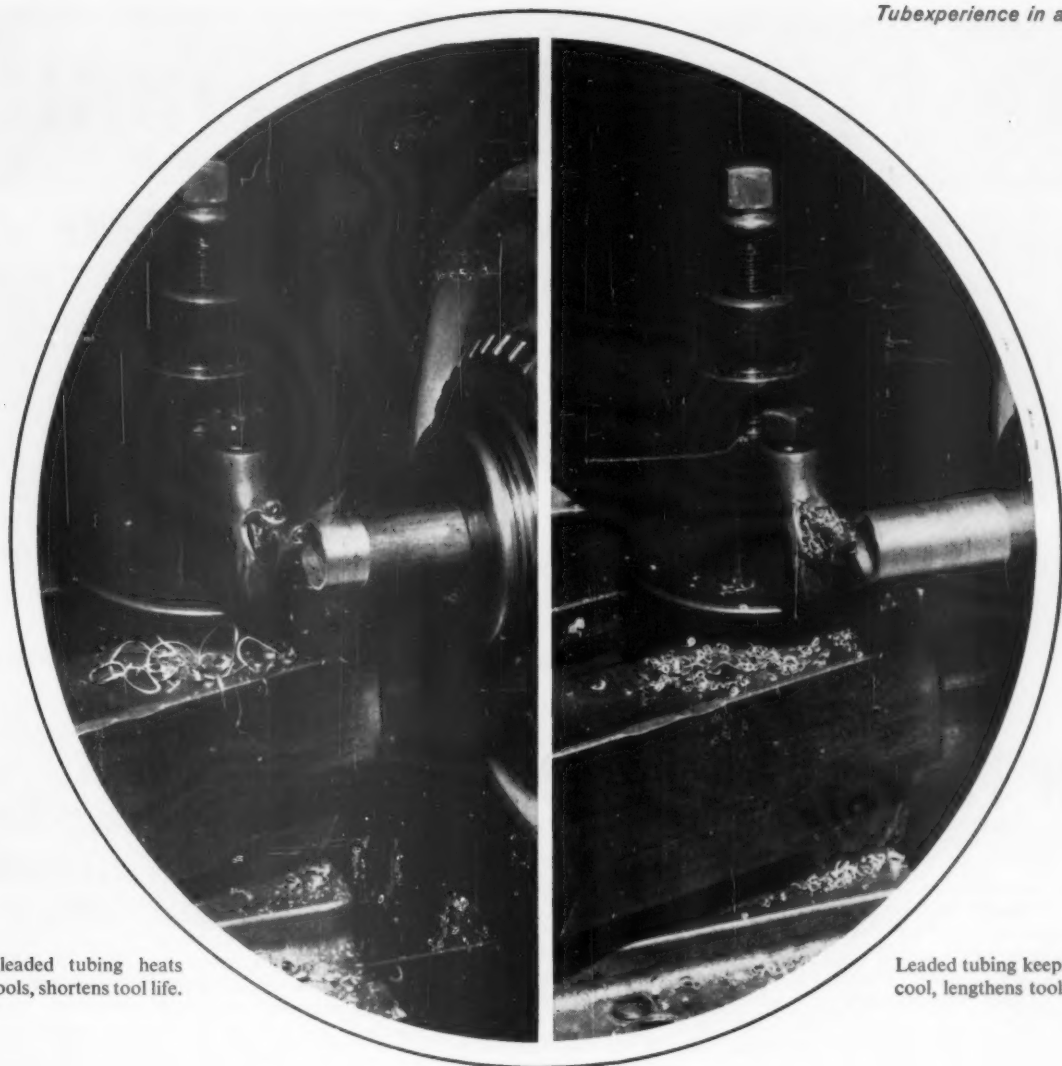
Write No. 27 on Inquiry Card—Page 36

### "Rapid Approach" Hydraulic Pump



A portable hydraulic pump that can be started under full load is designed for fast operation. Intended for all types of hydraulic tools used in the electrical, construction and industrial production trades, such as bus bar benders, knockout punches, bench presses, hydraulic cylinders, etc.

Please turn to page 118



Nonleaded tubing heats up tools, shortens tool life.

Leaded tubing keeps tools cool, lengthens tool life.

## Now Superior Carbon Steel Tubing with Built-in Lubrication

**New leaded 1020 tubing permits faster speeds and heavier feeds, often reduces the number of finishing operations**

Where machinability is of major importance, specify Superior Seamless Leaded 1020 Tubing. Its built-in lubrication permits faster speeds in turning, drilling, tapping, milling, grinding and other machining operations, provides an 18% increase in feeds, and often reduces the number of finishing operations required to produce a smooth, lustrous surface. Build-up of metal at the cutting edge of the tool is minimized. Chip formation is improved. Tools operate at lower temperatures, last longer, and require fewer dressings. Lower tool cost is an

accompanying benefit. Another is reduced downtime for replacement of dull and wornout tools. There is virtually no difference in physical and mechanical properties between leaded and nonleaded carbon steel tubing. So the grades are interchangeable.

Superior Seamless Leaded 1020 Tubing is available in a range of ODs from .012 through 1½ in. For particulars, send for Data Memorandum No. 24. And remember that other small-diameter tubing is available in more than 120 analyses, meeting a very broad range of applications. Superior Tube Company, 2034 Germantown Ave., Norristown, Pa.

# *Superior Tube*

The big name in small tubing  
**NORRISTOWN, PA.**

*All analyses .010 in. to ⅝ in. OD—certain analyses in light walls up to 2½ in. OD*  
West Coast: Pacific Tube Company, Los Angeles, California • FIRST STEEL TUBE MILL IN THE WEST

For More Information Write No. 222 on Inquiry Card—Page 36

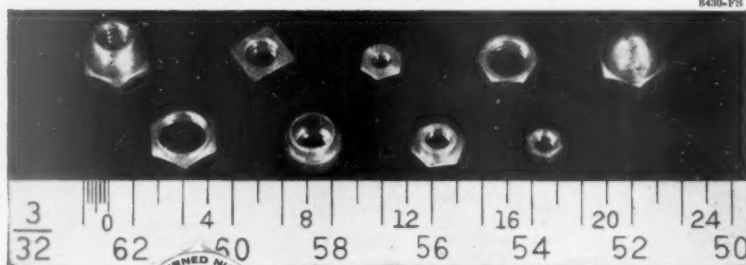
**Take a  
close look  
at precision...**



**in  
MINIATURE!**

This is a brass "jewel" nut. A .100-100 shoulder nut used in precision electrical instruments, it is mass produced by FISCHER to Class 3 tolerances, countersunk both sides and supplied deburred, cleaned, ready to install.

FISCHER specializes in turned nuts... standards, specials, odd sizes and types... having diameters from  $\frac{1}{8}$ " and standard or special threads from No. "0". Each type is made to exacting specifications, delivered promptly, priced competitively. And these are the reasons FISCHER is your best source for dependable miniature nuts.



there's no  
premium  
for precision at



*This enlarged scale photograph illustrates typical miniature nuts being supplied for electrical and electronic products.*

For details and  
specifications  
on Fischer brass  
and aluminum nuts,  
write for CATALOG  
FS-1000 and prices.



**Fischer**  
FISCHER SPECIAL MFG. CO.

471 Morgan Street  
Cincinnati 6, Ohio

For More Information Write No. 224 on Inquiry Card—Page 36

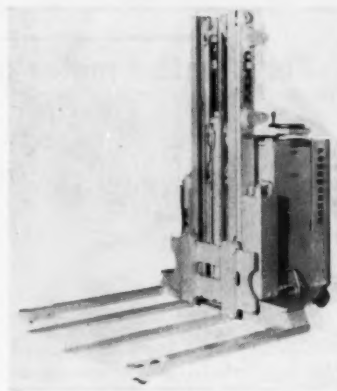
**Products**

(Continued from page 114)

Two-speed feature provides oil delivery of 115 cu. in. per minute at pressures up to 150 psi during cylinder plunger approach, and, under load, automatically switches to 57 cu. in. per minute oil delivery at high pressure, 10,000 psi. Power for unit's axial piston pump is supplied by a one horsepower 3450 rpm repulsion motor which is available for all standard commercial voltages. Blackhawk Manufacturing Co., 5325 West Rogers St., Milwaukee, Wisc.

Write No. 28 on Inquiry Card—Page 36

**Straddle Truck for  
Confined Areas**



A new battery-powered, rider-type straddle truck is available for tiering palletized materials in confined areas. Designed in 2000 and 3000 lb. capacities, both at 24-inch load center, unit will carry capacity loads through aisles as narrow as 42 in. Its turning radius is 62 in., and it has travel speeds up to 4.6 mph without load and 4.2 mph with load, both forward and reverse. Minimum aisle needed for right angle stacking is 71 in. Hydraulic system provides lift speeds up to 25 ft. per minute with capacity load, and a flow control valve regulates lowering speed of the forks regardless of load. Outriggers are designed for heavy duty operation and provide maximum stability. Clark Equipment Co., Industrial Truck Division, Battle Creek, Michigan.

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For More Information Write No. 225  
on Inquiry Card—Page 36

**PURCHASING**





# The Aluminum You Need is in Inventory

The Finest Products  
Made with Aluminum

are made with  
**REYNOLDS**  **ALUMINUM**

Whether you punch, stamp, form, draw or machine aluminum, the exact alloy, temper and size you need is in your Reynolds Distributor's stock. You save inventory investment, inventory space—and you're assured of prompt delivery of the finest quality aluminum available. The distributor representative who calls on you knows aluminum, its versatility and its applications. He's Reynolds trained. Make use of his technical knowledge to save production steps. And, at your next meeting, ask him about the basic fabrication services he can offer. He represents aluminum stock, aluminum service and aluminum economy. To get the most from the aluminum you need, rely on Reynolds Distributor inventory. Call him today.

**REYNOLDS METALS COMPANY**  
Richmond 18, Virginia

See next page  
for list of distributors →

# These sources serve you with aluminum from stock

for fast delivery of the aluminum you need,  
as you need it, call your nearby

## REYNOLDS ALUMINUM DISTRIBUTOR

He's listed under "Aluminum" in your classified phone book

**ALABAMA**  
Reynolds Aluminum Supply Co., Birmingham

**ARIZONA**  
Reynolds Aluminum Supply Co., Phoenix

**CALIFORNIA**  
American Building Materials Co., (Architectural Only)  
Sacramento  
Brasco Metals Inc., \*Los Angeles  
Metals Supply, \*Emeryville  
Perry Kilaby, Inc. (Tubing & Pipe) \*Los Angeles  
Pioneer Aluminum Inc., \*Los Angeles  
Rebco, Inc., (Architectural) Los Angeles  
Reynolds Aluminum Supply Co., Fresno, \*Los Angeles,  
North Hollywood, Ontario, Sacramento, San Diego  
and San Francisco  
Joseph T. Ryerson & Son Inc., Los Angeles  
Turner Metal Supply, (Wire, Rod, & Bar) \*Los Angeles

**COLORADO**  
M. L. Foss Inc., \*Denver  
Industrial Metals, Inc., \*Denver  
Silver Steel Co., \*Denver

**CONNECTICUT**  
American Steel & Aluminum Corp., \*Hartford  
Peter A. Frasse & Co., \*Hartford, Wallersfield  
Joseph T. Ryerson & Son Inc., Wallingford

**FLORIDA**  
Reynolds Aluminum Supply Co., Jacksonville, Miami

**GEORGIA**  
Reynolds Aluminum Supply Co., \*Atlanta and  
Savannah  
Southern Aluminum Finishing Co. (Architectural)  
Atlanta

**ILLINOIS**  
Aluminum Distributors, Inc., \*Chicago  
J. G. Braun Co., (Architectural) \*Chicago  
Jones & Laughlin Warehouse Div., Chicago  
Kasle Steel Corp., Chicago  
C. A. Roberts Co., (Tubing & Pipe) Franklin Park  
Benjamin Wolff & Co., Chicago

**INDIANA**  
Jones & Laughlin Steel Warehouse, (Holiday Steel)  
\*Indianapolis  
Kasle Steel Corp., Elkhart  
United States Alum. Co., \*South Bend

**KANSAS**  
Industrial Metals, Inc., Wichita

**KENTUCKY**  
Cobb Sales Co. (Wire, Rod, Bar) \*Louisville  
Reynolds Aluminum Supply Co., Louisville  
Jones & Laughlin Steel Warehouse Div., Louisville

**LOUISIANA**  
Jones & Laughlin Steel Warehouse Div., New Orleans

**MARYLAND**  
Clendenin Bros., Inc., \*Baltimore

**MASSACHUSETTS**  
Admiral Brass & Copper Co., Inc. \*Cambridge  
(Wire, Rod, Bar)  
American Steel & Aluminum Corp., Cambridge  
The Congdon and Carpenter Co., Fall River, Mass.  
Jos. T. Ryerson & Son, Inc., Boston

**MICHIGAN**  
Jones & Laughlin Warehouse Div., Detroit  
Kasle Steel Corporation, \*Detroit and Grand Rapids  
McDonnell Bros., Inc., (Architectural only) \*Detroit  
Mt. Morris Bldg. Products, Inc. \*Mt. Morris  
(Architectural)  
Joseph T. Ryerson & Son, Inc., Detroit

**MINNESOTA**  
MacArthur Co., (Architectural only), \*St. Paul  
Vincent Brass & Aluminum Co., \*Minneapolis, St. Paul

**MISSOURI**  
Industrial Metals, Inc., \*Kansas City and St. Louis  
Jos. T. Ryerson & Son, Inc., St. Louis

**NEBRASKA**  
United Brass & Aluminum Co., Inc., \*Omaha

**NEW MEXICO**  
New Mexico Tank & Culvert Co., \*Albuquerque,  
N. Mex.  
Silver Steel Co., Albuquerque, N. Mexico

**NEW JERSEY**  
Julius Blum, Carlstadt  
Edgecomb Steel and Aluminum Corp., \*Hillside  
Peter A. Frasse & Co., Lyndhurst  
Mapes & Sprowl Steel Co., \*Union  
Joseph T. Ryerson & Son, Inc., Jersey City  
Passaic Metals, Passaic

**NEW YORK**  
J. G. Braun Co., (Architectural only) New York  
Edgecomb Steel & Aluminum Corp., Hillside, N. J.  
Peter A. Frasse & Co., Buffalo, \*New York, Syracuse,  
Tonawanda  
Lang Island Tinsmith Supply Corp. (Architectural),  
\*Richmond Hill, N. Y.  
Mapes & Sprowl Steel Co., Union, N. J.  
Ontario Metal Supply, Inc. (Wire, Rod, Bar) \*Rochester  
Joseph T. Ryerson & Son, Inc., Jersey City, N. J.,  
Buffalo  
Sheet Metal Mfg. Co., Inc. (Architectural) \*Brooklyn

**NORTH CAROLINA**  
Reynolds Aluminum Supply Co., Raleigh

**OHIO**  
Hynes Steel Products Co., Youngstown  
Jones & Laughlin Warehouse Div. (Hamilton Steel),  
Cleveland  
Jones & Laughlin Warehouse, Div., Cincinnati  
Kasle Steel Corporation, Cleveland  
Mutual Manufacturing & Supply Co., \*Cincinnati  
Vorys Brothers, Inc. \*Columbus

**OKLAHOMA**  
Industrial Metals, Inc., Tulsa  
Joseph T. Ryerson & Sons, Tulsa

**OREGON**  
Reynolds Aluminum Supply Co., Portland

**PENNSYLVANIA**  
Athos Steel Service Co., \*Philadelphia  
Bethlehem Aluminum, Inc. (Architectural only)  
\*Bethlehem  
Collins-Edmonds, Inc. \*Philadelphia (Welding Wire)  
Peter A. Frasse & Co., Philadelphia  
Merchant & Evans Co., \*Philadelphia  
Morgan Aluminum-Welding Wire Co., Mt. Carmel, Pa.  
(Welding Wire)  
Penna. Industrial Supplies Co., Inc., \*Pittsburgh

**RHODE ISLAND**  
The Congdon & Carpenter Co., \*Providence

**SOUTH CAROLINA**  
Reynolds Aluminum Supply Co., Columbia

**TENNESSEE**  
Jones & Laughlin Warehouse, Div., Nashville  
Reynolds Aluminum Supply Co., Memphis and  
Nashville

**TEXAS**  
Allied Metals Inc., \*Houston  
Superior Sales Company, \*Fort Worth  
Joseph T. Ryerson & Son, Dallas and Houston

**VIRGINIA**  
Reynolds Aluminum Supply Co., Richmond

**WASHINGTON**  
Reynolds Aluminum Supply Co., Seattle and Spokane

**WISCONSIN**  
Milwaukee Bridge Company, Milwaukee  
(Architectural)  
Joseph T. Ryerson & Son, Inc., Milwaukee  
Benjamin Wolff & Co., \*Milwaukee

**TERRITORY HAWAII**  
American Factors, Ltd., \*Honolulu  
\*Indicates main office

Watch Reynolds TV show "WALT DISNEY PRESENTS"  
every week on ABC-TV

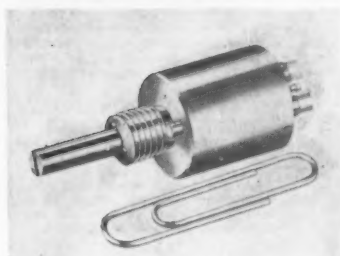
The Finest Products  
Made with Aluminum

are made with

REYNOLDS  ALUMINUM

## Products

### Miniature Precision Potentiometer



A 1/2 in. potentiometer is designed to meet the need for extreme miniaturization without sacrifice of high precision and accuracy. One-piece metal case and bearing design eliminates need for special assembly precautions. Components are completely enclosed by molded covers with integrally cored, solid terminals that cannot loosen or transmit solder, resin or other foreign matter into unit. Completely sealed covers and "O" ring sealed shafts are available for maximum resistance to corrosive environmental conditions. Multi-finger precious metal contact brush is featured. Threaded bushing, servo, ball bearing and other shaft arrangements available. Electronic Sales Division, DeJur-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, New York.

Write No. 30 on Inquiry Card—Page 36

### High-Pressure, Two-Way Directional Control Valve



A new quick-acting, high-pressure, two-way directional control valve (Please turn to page 123)

## Are Ball and Roller Bearings Important to Your Production?



Now you can make substantial savings on precision bearings with guaranteed assurance of quality and performance. International KOYO bearings are produced under the most rigid quality control standards in the world. Backed by 40 years of know-how in serving a world-wide market, these are anti-friction bearings of *every type...every size...and of unequalled quality*. Manufactured under an exclusive patented forging process, these bearings are available in any degree of high precision.

#### A Product of American and Japanese Teamwork

Manufactured in Japan in one of the world's most modern bearing plants, International KOYO bearings are an outstanding example of American and Japanese teamwork. Millions of dollars in precision American machine tools are used in their manufacture. In addition, 95% of the iron ore used in the bearing steel is a product of the U. S.

If you are looking for *longer life...greater load capacity...and lower costs* in your bearings, investigate International KOYO—the *most complete line* of quality bearings in the world market!

FOR COMPLETE INFORMATION WRITE DEPT. H-7



# International

## BALL & ROLLER BEARING CORP.

GENERAL OFFICES: 3123 Eastlake, Seattle 2, Washington  
For More Information Write No. 226 on Inquiry Card—Page 36

**When You Call for Rope  
CALL FOR  
COLUMBIAN**



Be sure the rope you buy is tape-marked COLUMBIAN GUARANTEED ROPE and carries the red, white and blue surface markings that guarantee you the finest rope produced today. For more than 50 years the reputation of Columbian—one of the world's largest cordage manufacturers—has been based on tape-marked rope. Whether Manila, Nylon or Dacron,\* the rope with the tape marking is your rope, for finest service, for longest life.

\*Dacron is a trademarked DuPont polyester fiber.

**To Cut Shipping Costs  
CALL FOR Jet-Pak  
Cushioned-Insulated Bags**



For any small-parts shipping, you'll find Jet-pak the ideal container. Cushioned against transportation shocks, insulated against extremes of temperature. With its sturdy kraft lining and resilient padding, Jet-pak supplies positive protection from moisture. You'll profit by the low-cost shipping the "bag of 100 uses" gives.



**COLUMBIAN  
Rope Company**

Auburn "The Cordage City," N. Y.

For More Information Write No. 227 on Inquiry Card—Page 36

**Wilkerson**

**"WHIRLFLO"**

**REMOVES OIL** and water from compressed air lines!

Used for paint spraying, sand blasting, instruments, air blowing or respiratory equipment.

**HOW THE "WHIRLFLO" 2-STAGE ACTION WORKS**

1. Centrifugal force from special baffle vane sends contaminants to walls of cylinder from where they drain into sump.
2. Partially cleaned air flows through "Micro-Pruf" cartridge which is 4 times as absorbent as others, and will filter finer with low pressure drop, even though it has more yards of material.



**YOU SAVE ON MAINTENANCE AND OPERATION BECAUSE**

1. The cartridge lasts 4 times longer than others.
2. Cartridge is easily replaced by removing one nut while unit remains on pipe line.
3. Addition of automatic petcock eliminates human failure to drain and keeps cartridge from becoming saturated.

**EXCLUSIVE FEATURES OF THE "WHIRLFLO"**

- Contains the only textile cartridge filter with automatic shrinkage take-up plate.
- "Micro-Pruf" cartridge removes particles as small as 3 microns—Absorbs 4 times its own weight.
- 200% greater CFM capacity with maximum pressure 250 PSI.

WRITE TODAY For All The Facts on this Money Saving Wilkerson "Whirlflo" Filter

Available in 1/2" to 5" pipe sizes.

**WILKERSON CORPORATION**

**THE LEADING LINE OF AIR LINE PRODUCTS**

"Dedicated to keeping the NEW in Pneumatics"

1657 W. Girard, Englewood, Colo.

For More Information Write No. 228 on Inquiry Card—Page 36

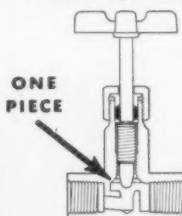


**MARSH  
Needle Valves**

MAXIMUM  
WORKING PRESSURE  
10,000 PSI

**... for finer regulation of water, oil or gas**

First needle valve to combine all the characteristics called for in modern industry. Embodies sturdiest basic construction—machined from solid bar stock—suitable for pressures to 10,000 psi and equally efficient in lower range. Note



stem guide fused to body by new "Conoweld" process, eliminating faults of conventional two-piece valves. Stem 416 stainless steel. Stem threads fine pitch for strength and micrometer regulation. Body electro-zinc plated. Sizes 1/8" to 1", globe and angle patterns.

**Ask for new Needle Valve Catalog**

MARSH INSTRUMENT CO. Sales Affiliate of Jas. P. Marsh Corp. Dpt. G, Skokie, Ill.  
Marsh Instrument & Valve Co. (Canada) Ltd., 8407 103rd Street, Edmonton, Alberta, Canada

For More Information Write No. 229 on Inquiry Card—Page 36



## Products

(Continued from page 121)

valve is now available. Built for 0 to 3000 psi operating pressures, valve features low pressure drop, high flow capacity, and positive seal. Design provides sufficient hydraulic balance to assure low turning torque for easy valving of fluids. Small and weighing only 21 lbs. 7 oz., valve is available with 1/4 in., 3/8 in., and 1/2 in. dry seal pipe thread parts. Designed for long life and easily serviced, valve has aluminum body and hardened steel operating parts, will handle oils, non-corrosive fluids and lubricated air, and may be used for in-line and panel mounted installations. Sarasota Precision Products, Inc., 1314 N. Lime Avenue, Sarasota, Florida.

Write No. 31 on Inquiry Card—Page 36

### Push-Button Timer for Automatic Appliances



Electronic Timers Corp. of Warsaw, New York, a division of P. R. Mallory & Co., Inc., offers a new timer switch for automatic appliances. Push-button timer automatically sets up any of 24 different cycles for use in home laundries or driers, vending machines, and other automatic sequence-controlled products. Design is readily modified for wide range of physical configurations, and single panel mounting of switching contacts makes cable harness connection easy. Terminal board can be located on any of three sides of switch, and sub-interval switching is readily incorporated. Features include four-second programming and positive program selection which terminates at mechanical stop to assure correct cycle selection.

Write No. 32 on Inquiry Card—Page 36

Want to strip "unstrippable" coating?

## ask Oakite

OVER 50 YEARS CLEANING EXPERIENCE • OVER 250 SERVICE MEN • OVER 160 MATERIALS



### Even tough EPOXY FINISHES peel off in Oakite STRIPPER S-A

Burn off an epoxy finish from a reject as a last resort? Not at all necessary. Oakite STRIPPER S-A strips metals clean. That's true for multiple coats as well as single coat epoxy finishes. Look at STRIPPER S-A's record:

- A 3/16" thick coating built up from layers of epoxy coating and wrappings of fiber glass was stripped from gun barrels by overnight soak in Stripper S-A. Everything tried previously had failed.
- Brass plated steel parts were stripped of their epoxy finish in matter of minutes.
- Workholding spindles and racks laden with at least 10 coats were stripped to bare metal by a short soak. Paint hooks formerly burned clean are now soaked clean instead.

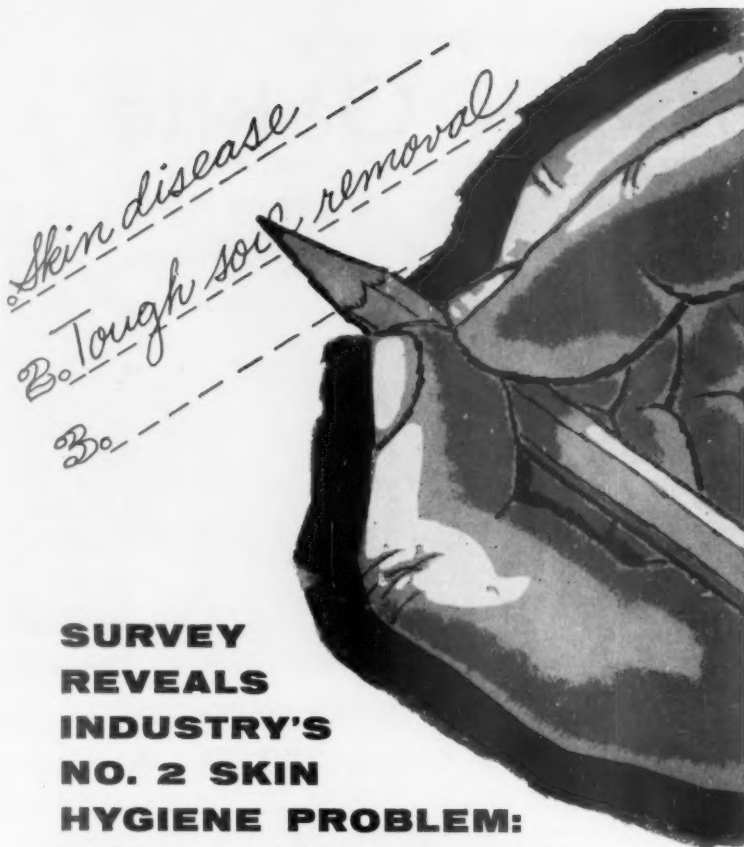
This powerful stripper is safe for all metals except zinc and magnesium. And it's safe to the user, since it works cold... has no flash point... rinses with water.

STRIPPER S-A is but one of a long list of superior strippers by Oakite. Some are specially formulated for use on steel... aluminum... other metals. Some for removing lacquers... tough synthetic finishes. Still others are designed especially for removing paint from vertical surfaces. Whatever your paint-stripping problem—Oakite is bound to have the answer. Ask your local Oakite man or send for paint-stripping bulletin F-7893. Oakite Products, Inc., 34E Rector Street, New York 6, N. Y.

it PAYS to ask Oakite



For More Information Write No. 230 on Inquiry Card—Page 36



## **SURVEY REVEALS INDUSTRY'S NO. 2 SKIN HYGIENE PROBLEM: TOUGH SOIL REMOVAL**

*Here's help on the problem from SBS*

A recent survey of 2,177 major plants pinpoints industry's most serious skin hygiene problems.

1. SKIN DISEASE and
2. REMOVAL OF TOUGH SOILS

Naturally, the second contributes to the first. Because tough soils invariably lead to the use of harsh cleaners and solvents when proper cleaners aren't handy. Heavy greases, resins, tars, and similar soils resist ordinary skin cleaners, and when the worker finds he can't remove them, he resorts to solvents or other materials that injure his skin. Result: skin disease, poor employee relations, cost and waste.

What can you do? Ask an SBS representative to show you "Operation Pinpoint", 10 minute sound slide digest of the national survey, and you'll see how a *planned corrective program* can solve these skin hygiene problems. Because SBS produces a *complete range of cleansers*, he can suggest the right cleanser for each job. For the safest answer to tough soils, write today . . . Dept. 5-F.

*the washword of industry*

**sugar beet products co.**

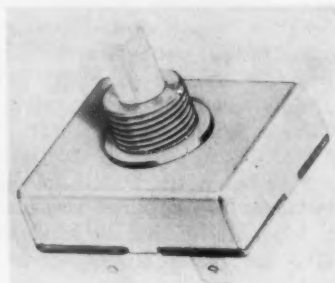
SAGINAW, MICH. • Los Angeles, Calif. • Newark, N. J.  
CANADA: Chemical By-Products, Ltd., Toronto, Ontario



For More Information Write No. 231 on Inquiry Card—Page 36

## **Products**

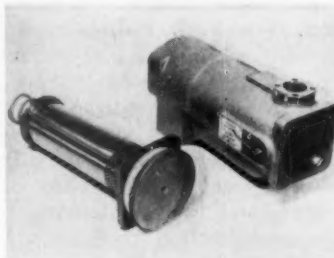
### **Compact and Versatile Rotary Switch**



A new rotary switch which offers a selection of eight different combinations of one, two, or three SPST switch positions is now being marketed. Unit is versatile and compact, designed for appliance, vending machines and other industrial applications. Features include 3/16 in. wide spade terminals with holes for solder connections, positive indexing, metal cover and a molded nylon shaft and cam. Listed by Underwriters' Laboratories, switch is rated at 10 amps, 125 volts a.c.; 1/3 h.p., 125/250 volts a.c. Controls Company of America, Schiller Park, Ill.

Write No. 33 on Inquiry Card—Page 36

### **Fluid Flow Meter Checks Pump Efficiency**



A new fluid flow-rate meter is described as low in cost and high in accuracy. Meter consists of two basic parts, the housing and the cartridge, a sliding piston mechanism, and can be installed on hydraulic test stands, power units, and in bulk liquid transmission operations. Available in five maximum capacities, from 10 to 200 gpm, meters work under vacuum and pressures up to 5000 psi. Ad-

(Please turn to page 127)



Standard microsize UNBRAKO socket cap and set screws, #0 through #3, are supplied by your authorized industrial distributor in heat-treated alloy or stainless steel. Available with Nylok® self-locking feature.

## Standard Microsize UNBRAKO Socket Screws Reduce Costs of Fastening Small Assemblies

Microsize UNBRAKO socket cap and set screws save both time and money in the design and assembly of your small devices. Precision manufactured, available locally, they eliminate the cost and delay of designing or procuring special screws to fasten tiny components. Use them in computers, servomechanisms, instruments, miniaturized electrical and electronic equipment—countless small, intricate devices where reduction in weight and bulk is required without sacrificing strength or reliability.

These miniature socket screws have all the advantages of larger UNBRAKOS. Deep, accurate sockets for non-slip, high-torque wrenching. Radii in socket corners to eliminate sharp angles where cracks start. Fully formed threads for greater strength and precision fit. Controlled fillets under cap screw heads to prevent shearing. Careful heat treat for maximum tensile values without brittleness or decarburization. Because of these features, microsize UNBRAKO socket cap screws are as much as 80% stronger than ordinary miniature cap screws, and microsize UNBRAKO socket set screws can be torqued tighter than ordinary miniature set screws. This extra strength means greater reliability in the fastening of your small assemblies.

For more information, see your authorized SPS distributor. He carries microsize UNBRAKOS in both alloy steel and stainless in sizes #0, #1, #2 and #3. Or write us for Bulletin 2374 and samples. UnbraKO Socket Screw Division, STANDARD PRESSED STEEL CO., Jenkintown 31, Pa.

\*T.M. Reg. U.S. Pat. Off., The Nylok Corporation

We also manufacture precision titanium fasteners / write for free booklet

**SPS** Jenkintown • Pennsylvania  
Standard Pressed Steel Co. • The Cleveland Cap Screw Co. •  
Columbia Steel Equipment Co. • National Machine Products Co.  
• Nutt-Shel Co. • SPS Western • Standco Canada Ltd. •  
UnbraKO Socket Screw Co., Ltd.

HEAT-TREATED ALLOY STEEL Microsize UNBRAKO Socket Cap Screws Class 3A Threads						
Diameter	Threads per inch		Length	Recommended Installation Torque in Inch-Pounds		Weight per 1000 in Pounds
	NC	NF		NC	NF	
#0	A .096	80	1/8	2.0		.21
	B .060	80	3/8	2.0		.22
	D .060	80	1/4	2.0		.26
	F .050	80	3/4	2.0		.33
#1	A .118	72	1/8	3.5		.31
	B .073	72	3/8	3.5		.36
	D .073	72	1/4	3.5		.42
	F .050	72	3/4	3.5		.53
#2	A .140	56	3/8	6.0		.54
	B .086	56	1/4	6.0		.61
	D .086	56	3/8	6.0		.76
	F 1/4	56	1/2	6.0		.91
#3	A .161	48	3/8	8.5		.77
	B .099	48	1/4	8.5		.87
	D .099	48	3/8	8.5		1.07
	F 3/4	48	1/2	8.5		1.27

HEAT-TREATED ALLOY STEEL Microsize UNBRAKO Socket Set Screws Class 3A Threads—Plain Cup Point						
Diameter	Threads per inch		Length	Recommended Installation Torque in Inch-Pounds		Weight per 1000 in Pounds
	NC	NF		NC	NF	
#0		80	1/8		.5	.03
		80	3/32		.5	.04
	D .060	80	1/4		.5	.05
		80	3/32		.5	.06
	F .028	80	3/4		.5	.08
#1		72	1/8		1.5	.04
		72	3/32		1.5	.06
	D .073	72	1/4		1.5	.08
		72	3/32		1.5	.11
	F .035	72	3/4		1.5	.13
#2		56	1/8		1.5	.05
		56	3/32		1.5	.07
	D .086	56	1/4		1.5	.107
		56	3/32		1.5	.15
	F .035	56	3/4		1.5	.19
#3		48	1/8		5.0	.10
		48	3/32		5.0	.135
	D .099	48	1/4		5.0	.18
		48	3/32		5.0	.235
	F .050	48	3/4		5.0	.32

### HIGH RELIABILITY

SPS research is continually developing fasteners with higher and higher standards of predictable performance. By installing SPS high-reliability fasteners in your assemblies, you increase your overall product reliability.

For more information on the full meaning of reliability, write for a copy of the new SPS booklet "High Reliability."



Concentration on design and production of quality ball bearings for all kinds of uses over a 50-year period has taught us a lot. Like how to move fast when sudden new engineering needs arise. How to keep production flexible when everybody wants everything right now. How much worth there is—to our customers and to us—in pride of workmanship and real understanding of a supplier's duty to meet "when-promised" delivery dates. If things like this make sense to you, talk to us about your ball bearing requirements, whatever they may be. Bearings Company of America Division, Federal-Mogul-Bower Bearings, Inc., Lancaster, Pa.



For More Information Write No. 233 on Inquiry Card—Page 36

# AMES

*Masters of Measurement*



**200 SERIES**  
One of four sizes; made to AGD specifications.

Representatives in Principal Cities



**B.C. AMES CO.**

31 Ames Street, Waltham 54, Mass.

Canadian Office—B. C. Ames Co., 45 Oriole Parkway, Toronto

MANUFACTURERS OF MICROMETER DIAL INDICATORS AND GAUGES

For More Information Write No. 234 on Inquiry Card—Page 36

## PORTA-CHECK®

A transistorized comparator for fast, accurate measurement to .00001".



For more than half a century, Ames measuring instruments have been regarded as the finest available. Wherever precision is *really* important... you'll find Ames indicators, gauges, micrometers and comparators on the job.

If training is one of your problems..

Don't miss

Purchasing Magazine's

Special issue on this subject

Watch for the July 6th edition



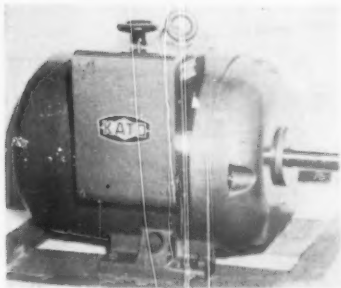
## Products

(Continued from page 124)

dition of limit switches informs user of changes in the flow rate, a feature ideal for maintaining constant rate of flow or detecting leakage. Viscosity of fluid may vary from 100 to 750 SSU without effect on meter accuracy. Rosaen Co., 1776 E. Nine Mile Rd., Hazel Park, Michigan.

Write No. 34 on Inquiry Card—Page 36

### Extended Line of DC Generators



A new line of DC generators is now available. Manufactured in sizes ranging from 500 watts to 40 KW with various voltages throughout the line, generators are intended for the many new applications for direct current in electronic industries. Extended line includes 50 different DC outputs, with other models in the engineering stage. Both shunt and compound wound units are available, permitting wide range of applications, including battery charging and testing, and operation of DC appliances. Kato Engineering Co., Mankato, Minnesota.

Write No. 35 on Inquiry Card—Page 36



"I used to get so tired lugging a heavy briefcase all day."

JUNE 22, 1959



**EVERY TIME  
YOU BUY  
THIS  
BRUSH...  
YOUR  
OWN  
GOOD  
JUDGEMENT  
SHOWS**


Today's industrial buyer is a special kind of expert. His job: spot and buy genuine value down the line—big purchase or small. And when it comes to *brushes*—both the men who *buy* and the men who *use* them agree on Osborn.

- The right Osborn Power Brushes, for instance, help you do cleaning, finishing or deburring jobs better, faster ... at less cost.

So to save buying time ... to cut buying costs ... to get built-in value automatically everytime—make Osborn your brand for *all* industrial brushes. Choose from a complete line of superior:

- Power brushes
- Paint and Varnish brushes
- Maintenance brushes

Full details in the new Osborn 112-page Catalog. Write for your free copy. The Osborn Manufacturing Company, Dept. U-45, Cleveland 14, Ohio.

*Osborn Brushes* 



POWER, PAINT AND MAINTENANCE BRUSHES • BRUSHING METHODS  
BRUSHING MACHINES • FOUNDRY PRODUCTION MACHINERY

For More Information Write No. 235—on Inquiry Card—Page 36

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# Forms Forum

The image displays a collection of forms from Brigham's, Inc., a company based in Cambridge, Mass. The forms are designed for use in a purchasing department and are color-coded: blue, yellow, and white.

**Requisition Form (Blue):** This form is used to request the purchase of goods. It includes a header with the Brigham's logo and the text "REQUISITION No. R 2076". The form contains fields for "To: The Purchasing Department, 30 Ames St., Cambridge 12, Mass.", "Please order items listed for", "Address", "Date", "Quantity", "Unit", and "Description". It also has a section for "DATE REQUIRED", "REQUISITIONED BY", "DATE ORDERED", "ORDERED BY", "QUANTITY FROM", "ADDRESS", and "REMARKS". A note at the bottom states: "This is Not A Purchase Order. OFFICIAL PURCHASE ORDERS ARE ISSUED ONLY BY THE PURCHASING DEPT."

**Purchase Order Form (Yellow):** This form is used to place orders with vendors. It includes a header with the Brigham's logo and the text "PURCHASE ORDER No. P 1993". The form contains fields for "DATE", "TO", "SHIP TO", "QUANTITY", "UNIT", "DESCRIPTION", "UNIT PRICE", and "EXTENSION". It also has a section for "DELIVERY DATE" and "SUPPLIER'S ACCEPTANCE". A note at the bottom states: "IMPORTANT - PLEASE NOTE: DELIVERY SLIP MUST ACCOMPANY SHIPMENTS. INVOICES SHOWING ORDER NUMBER AND ADDRESS TO WHICH MERCHANDISE HAS BEEN DELIVERED SHOULD BE MAILED DIRECT TO: Brigham's, Inc., 40 AMES STREET CAMBRIDGE, MASS."

**Purchase Ledger Form (White):** This form is used to track purchases. It includes a header with the Brigham's logo and the text "PURCHASE LEDGER". The form contains a table with columns for "DATE", "DIV", "NO.", "UNIT", "AMOUNT", "BALANCE", "DATE", "DIV", "NO.", "UNIT", "AMOUNT", and "BALANCE". It also has a section for "PRODUCT" and "VENDOR".

**Inventory Ledger Form (White):** This form is used to track inventory. It includes a header with the Brigham's logo and the text "INVENTORY LEDGER". The form contains a table with columns for "DATE", "VENDOR", "DIV", "AMOUNT RECEIVED", "UNIT", "PRICE", "DATE", "VENDOR", "DIV", "AMOUNT RECEIVED", "UNIT", and "PRICE". It also has a section for "PRODUCT" and "VENDOR".

The second card is a record of contract purchases. A card is made up for each contract or blanket order and shows the amounts drawn against the contract, which division received the material and the balance still open on the present contract. Each new contract requires a new card.

With IBM equipment and IBM punched cards, you have a unique data processing partnership. For behind this partnership is the pattern of IBM research, daily testing, the finest technical know-how, supported by more than forty years of experience. When you insist on IBM punched cards, you are guaranteed performance based on production techniques that are the models of precision engineering. The result: Your business has the finest in data processing.

**IBM<sup>®</sup>** SUPPLIES

**partners in precision**



**See your Webster  
carbon and ribbon  
salesman**

**...your source**

**for the best**

**duplicating supplies**

**available!**



---

**Make it clear you want**





## They're all made by Webster!

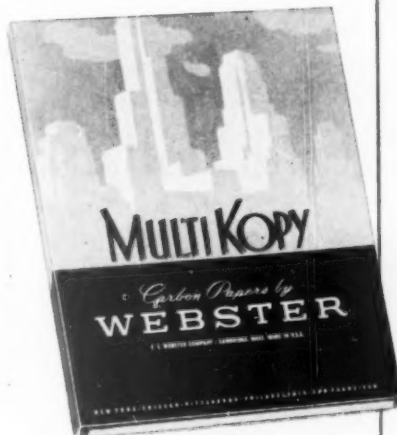
When a salesman represents the complete line of duplicating supplies made by F. S. Webster Company, you can be sure he represents top quality. His wide range of products saves you time, trouble and money. Not only does he represent "one-stop" buying for you, but he also has at his call a qualified duplicating sales engineer to advise him of your needs. Your salesman's products and services are yours for the asking.

### WEBSTER MULTIKOPY DURAMETRIC

The carbon paper that has the edge over every other brand. The exclusive scaled edge automatically assures neater, better spaced typing the first time. It's uncoated for cleaner letters, cleaner fingers and cleaner carbon handling. Even in extreme temperatures, it remains completely curl-free. You get fine performance and long service from every sheet.

### WEBSTER SILK STAR TYPEWRITER RIBBONS

No higher quality ribbon on the market. With Silk Star there are fewer ribbon changes, sharper impressions and longer service. Silk Star Ribbons are made of the finest quality silk so sheer that 18 yards fit the standard spool that holds only 12 yards of cotton. Strong and three times longer wearing, too. Perfect typing companion for Webster MULTIKOPY Durametric.



### Your stationery salesman is your source for these other Webster Quality Duplicating Products:

**CARBON PAPERS** for all office applications in eight grades.

Typewriter, pencil, pen, transfer, blueprint, billing in a variety of weights and finishes.

**SPIRIT DUPLICATING PAPERS AND MASTER UNITS** for both spirit and master duplicating units.

**CARBON PAPER RIBBONS** for correspondence, spirit duplicating, photo and offset work.

**OFFICE MACHINE RIBBONS** for most types of adding, accounting, tabulating and addressing machines.

**TYPEWRITER RIBBONS** in cotton, nylon and silk for all Typewriter makes.

For correspondence, record, offset, hectograph, photo blueprint.

**CARBON PAPER ROLLS** for Teletype, autographic Register, Elliott-Fisher and adding machines.

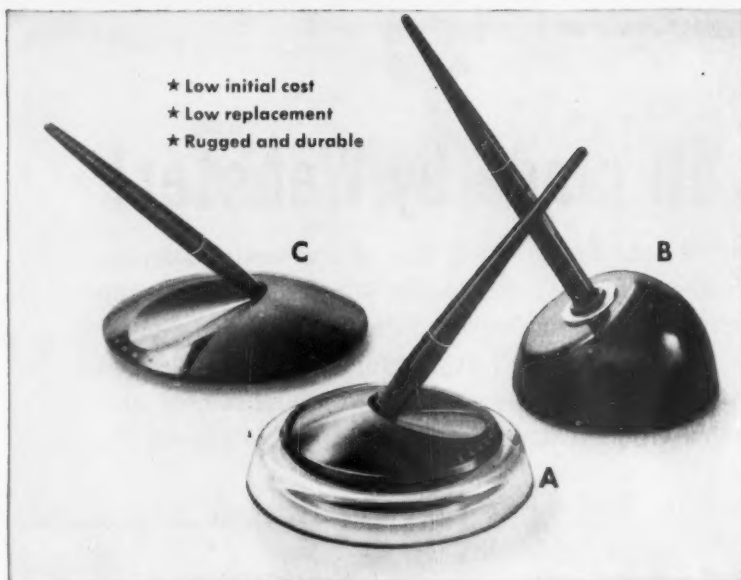
**plus**

**ACCESSORIES:** Type Cleaner, Instrument Oil, Duplicating Fluid, Hand Cleansers

# Webster

at leading stationers  
everywhere

F. S. Webster Co., 7 Amherst Street, Cambridge 42, Massachusetts



## These desk sets save replacement and repair dollars!

It's a fact! Almost all pen repair problems result from dropped or abused points. It's no problem for you if your company distributes Esterbrook desk sets to employees.

Esterbrook's 32 precision points are *instantly* replaceable—fit all Esterbrook pens, *regardless* of model.

And, Esterbrook desk sets are *value* priced—always *dependable*!



**A Esterbrook FEED-MATIC® base desk set**  
Holds up to 6-month supply of ink. Reservoir in base seals ink against evaporation and dust—feeds enough ink to the point to write 500 words. Spill-proof. Black, colors (Model 444). **\$4.50†**



**B Esterbrook DESKMASTER® fountain pen desk set**  
Fastest selling desk set in America—Esterbrook's precision fountain pen in a lustrous, porcelain base. Compact, efficient. In popular colors and black (Model 112).  
Black **\$3.75†**



**C Esterbrook RECORDER® ball point desk set**  
Writes 6 months in normal office use—A truly dependable ball point! Comes in choice of ink colors, fine or medium point. Deluxe Black, colors, \$3.95† Black **\$2.95†**

All desk sets available with chain and adhesive base for public counter use. Also doubles for use with two ink colors.

†List price per single unit. See your supplier for quotations.

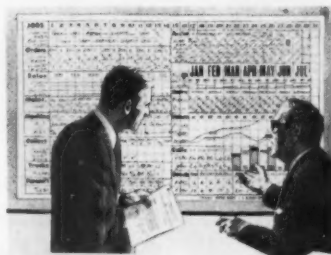
# Esterbrook®

®T.M.—The Esterbrook Pen Co.

**10-DAY FREE TRIAL**—Get one of these quality Esterbrook desk sets from your regular dealer. Use it 10 days. If you aren't completely satisfied, return it to your dealer with *no cost* to you.

For More Information Write No. 238 on Inquiry Card—Page 36

## Office Equipment



A new visual control board with an erasable writing surface for simplified step by step scheduling, charting, planning etc. has been announced by **L. D. Blehart Company, 10 Fiske Place, Mt. Vernon, N. Y.** Special feature of the new board is that you write, draw or post directly on the board with black and colored marking pencils. The writing can remain indefinitely or be wiped off with a paper towel.

Write No. 36 on Inquiry Card—Page 36

A free **booklet** containing samples of the newest colors for steel office walls has just been published. It is available from **Marnay Sales Division, Rockaway Metal Products Corp., 41 East 42nd Street, New York, N. Y.** The booklet gives suggestions on how to use the colors to create the most favorable working environment.

Write No. 37 on Inquiry Card—Page 37



**Art Metal Construction Company, Jamestown, N. Y.** has introduced a new line of **desks, tables and accessories.** Economy-priced the new furniture incorporates many features such as, full wrap-around pedestal shell with radius corners, all-welded frame construction, and six nylon glides for the drawers. Desks are available in three sizes, 46", 60" and 69".

Write No. 38 on Inquiry Card—Page 36



## FIRST NATIONAL STORES INC.

Leading food chain with stores in New England, New York and New Jersey

**FIRST NATIONAL STORES WAREHOUSE RECORD**

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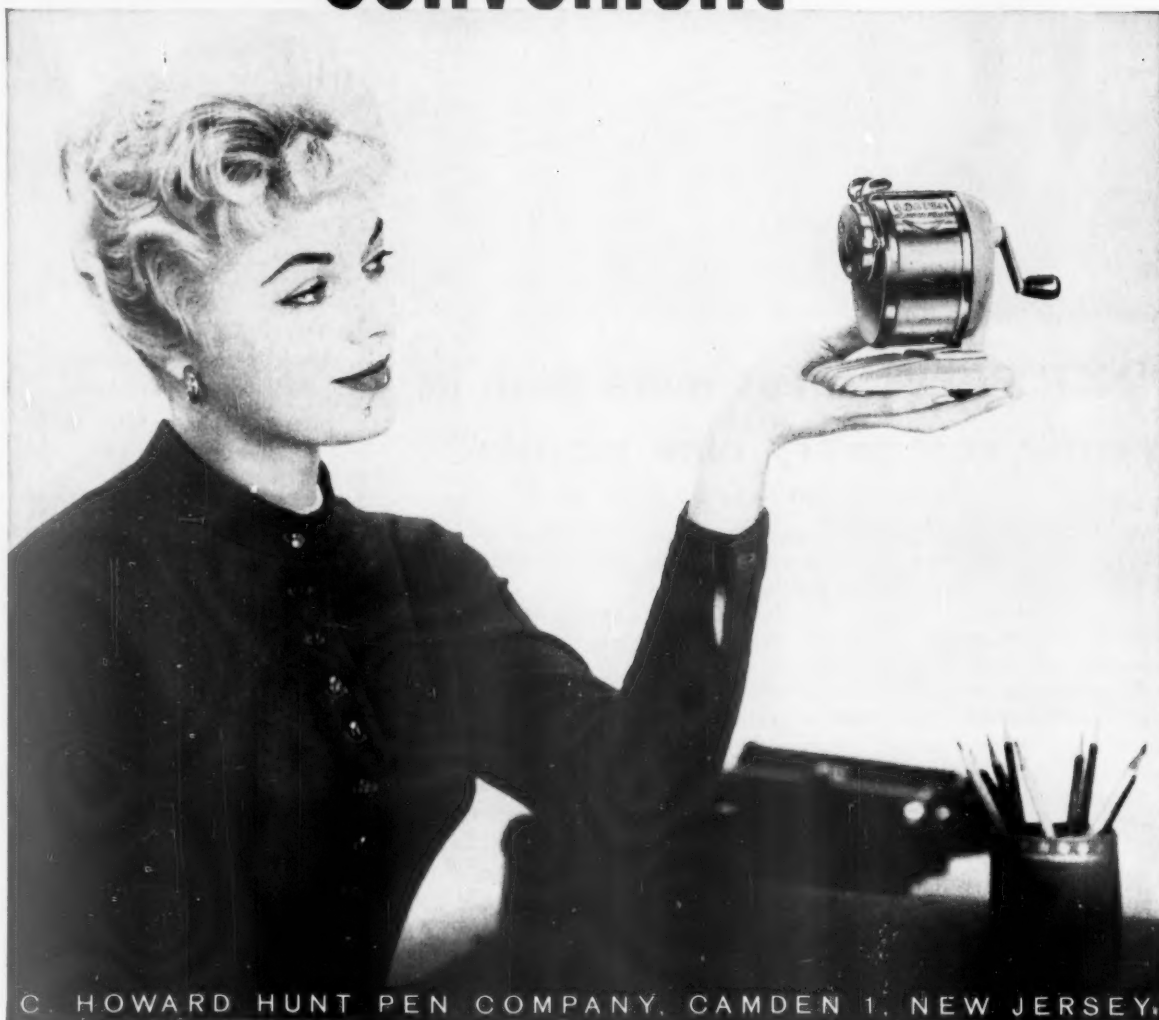
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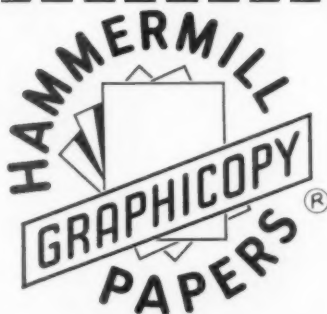
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## N. A. E. B. Holds 38th Annual Convention

**P**URCHASING agents and business officers from colleges and universities throughout the United States met in Miami Beach on May 11-13 for the 38th annual convention of the National Association of Educational Buyers.

Among the highlights of the three-day program were workshop sessions on Federal surplus property, purchasing of medical supplies and equipment, buying insurance, equipping and supplying laboratories, and buying and operating audio-visual and television equipment. Featured speakers at the general sessions were A. L. Terlouw, Eastman Kodak Company, on "The Communications Factor in Procurement,"; Prof. John H. Hoagland, Michigan State University, on "A Forecast for Purchasing,"; and E. J. Bofferding, Cresap, McCormick & Paget, on "Evaluating the Purchasing Department."

New N.A.E.B. officers for 1959-60 are Carl A. Donaldson, University of Nebraska, president; Bruce J. Partridge, University of Delaware, Elmer Jagow, Knox College, and Wm. Christensen, University of Utah, vice-presidents; John A. Pond, University of Colorado, treasurer; and Bert C. Ahrens, executive secretary.



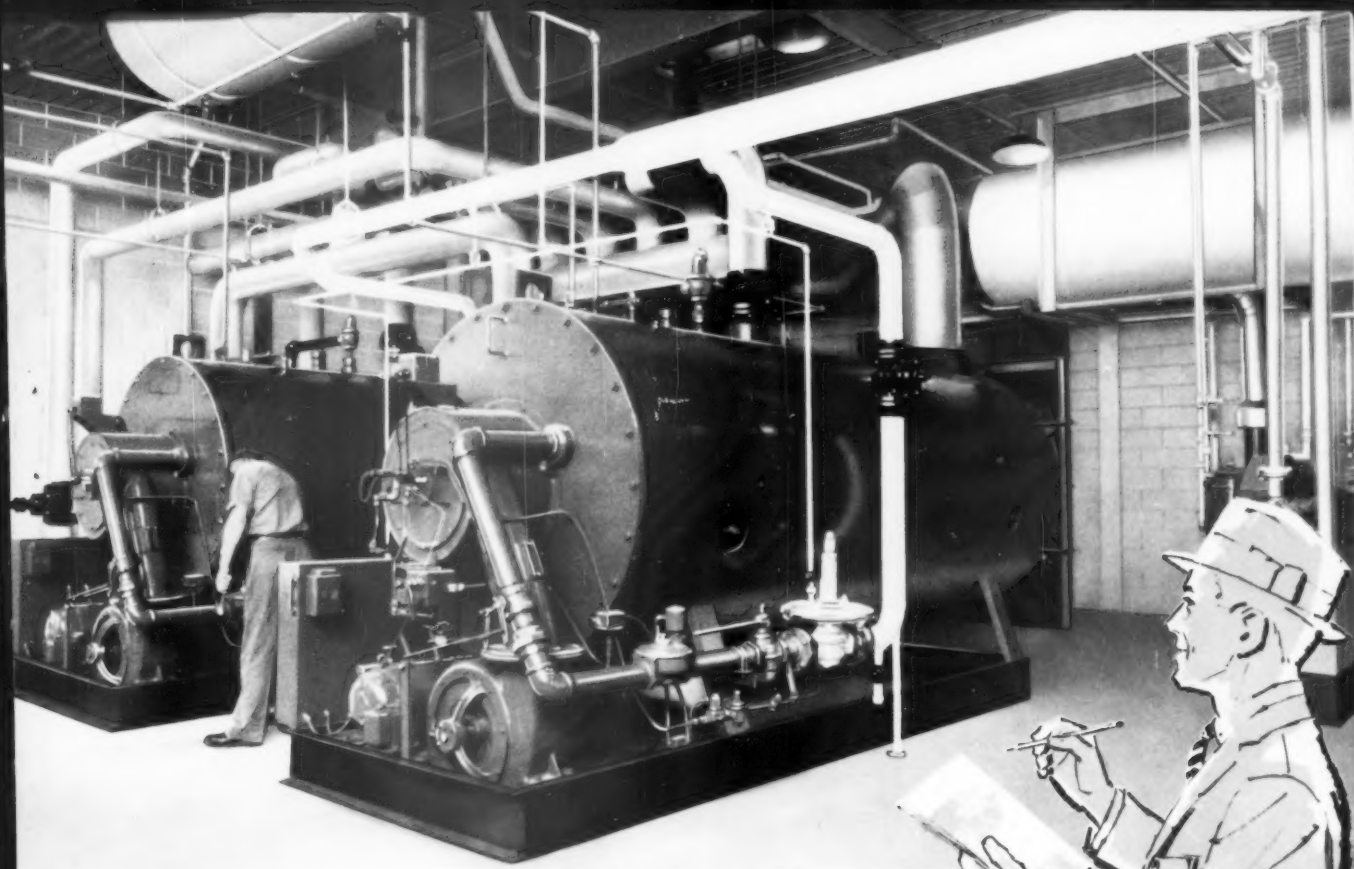
**Incoming President Donaldson**



(top l.) Kermit Jacobson leads workshop session on nuclear laboratories. (top r.) Jim Kitterskamp in a thoughtful mood. (r.) Executive - secretary Bert Ahrens and Virginia Allen from the University of Texas.



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**PURCHASING**



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*Be Sure You Have The Best "Paint Protection"*

The way to paint-protect your plant, inside and out, at the lowest cost is to use the paint that stays on *longest*. You get maximum economy and maximum protection. Fact.

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Truscon has been solving industry's paint-protection problems for 50 years. All over the world. Names of well-protected Truscon customers will be sent you on request.

Whatever the surface, whatever the conditions, Truscon formulates protective coatings that insure longer plant life for you. See the Yellow Pages of your telephone directory for the Truscon factory branch nearest you. Or write Truscon Laboratories, 1700 Caniff Street, Detroit 11, Michigan.



*the "cheapest" way  
to paint is to  
use the best paint  
...it stays on longer*

# TRUSCON *Laboratories*

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## Association News

### At the Educational Buyers Meeting . . . . .



Bill Hanlon, Ainslie Burks, and Vic Crans-ton (l. to r.) enjoy a breezy view from a balcony of the fabulous Fontainebleau.



Cocktail party discussion provokes contrasting emotions



Bruce Partridge conducts the insurance workshop.



Jim Rushing of Arkansas State.



Outgoing President and Mrs. George Warren.





## Leatherneck Kraft Helps Meet a New Deadline Every Day at McCall Corporation

More than 50 of the nation's most famous magazines are printed by the McCall Corporation in Dayton, Ohio. Nearly 60 million copies go out every month either in individual kraft paper jackets or bulk wrapped bundles for newsstand sale.

The tight scheduling and shipping of this vast quantity of "perishable" reading is a masterpiece of good coordination and planning.

In an operation of this kind there is little tolerance for failure of suppliers to adhere to delivery promises.

Crossett Leatherneck Kraft by the carload rolls onto McCall sidings at precisely timed intervals.

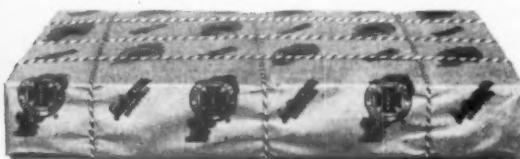
This is a big customer. But the size of the order is not a factor in dependability of delivery. Every Crossett customer enjoys the same benefits of reserved machine time and regular delivery in all kinds of markets.

Ask your Crossett dealer listed at the right how you can become a part of this assured delivery program.



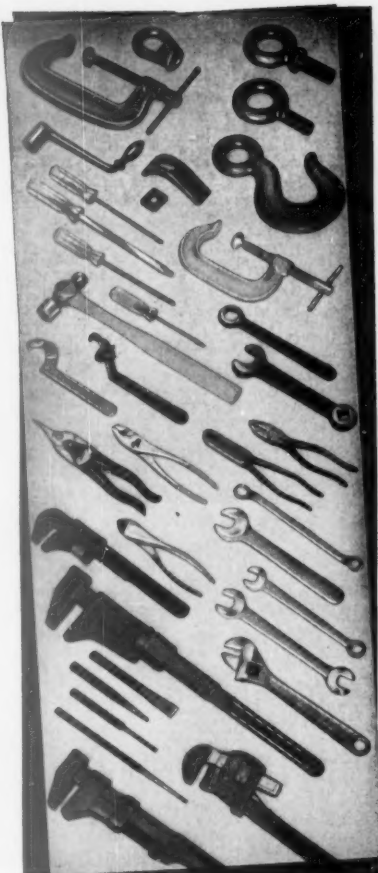
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## Association News

### District V. P. Visits Ann Arbor

Russell Stark, Fourth District vice president was the principal speaker at a recent meeting of the Ann Arbor Purchasing Agents Association. His subject was, "Will Purchasing Ever Grow Up?"

Mr. Stark likened the purchasing man who was grown up to the individual who has achieved professional status and respect in his chosen field. He is the man who is confident in his own ability to handle the requirements and challenges of his job.

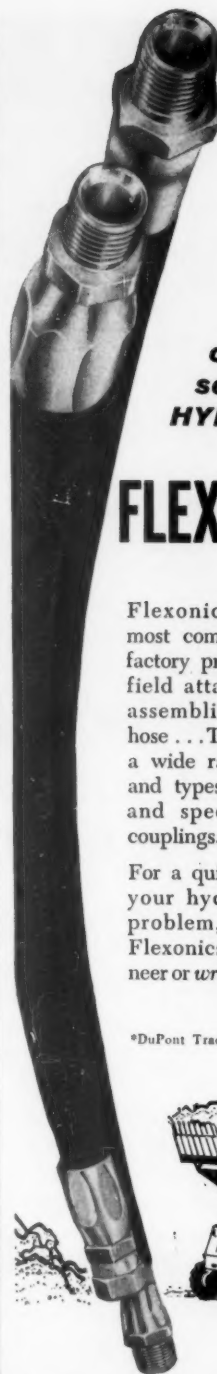
As a means of developing this self-confidence, Mr. Stark advocated active membership in N.A.P.A. By participating in the affairs of his local chapter, a purchasing man can keep abreast of the latest developments and thinking in his field. He can also gain confidence in his ability to get things done by actually planning and carrying to completion programs sponsored by his chapter.

### South Bend Elects New Officers

"Value Analysis plus Standardization Equals Profits" was the topic at a recent meeting of the South Bend Purchasing Agents Association.

Featured speaker was W. J. Pierce, of the Detroit Edison Co., Detroit, Michigan. Mr. Pierce is chairman of the National Committee on Value Analysis and an instructor in purchasing at the Materials Management Center, Wayne University.

Election of officers was held at the same meeting. The new slate was headed by H. J. Baker, U. S. Rubber Co. as president. Also elected were: W. H. Vanderbeck, National Standard Co., first vice president; Harry Lenard, Buescher Band Instrument Co., second vice president; Louis Hemmers, Miles Laboratories, national director; and R. L. Wolf, Domore Chair Co., Inc., secretary-treasurer.



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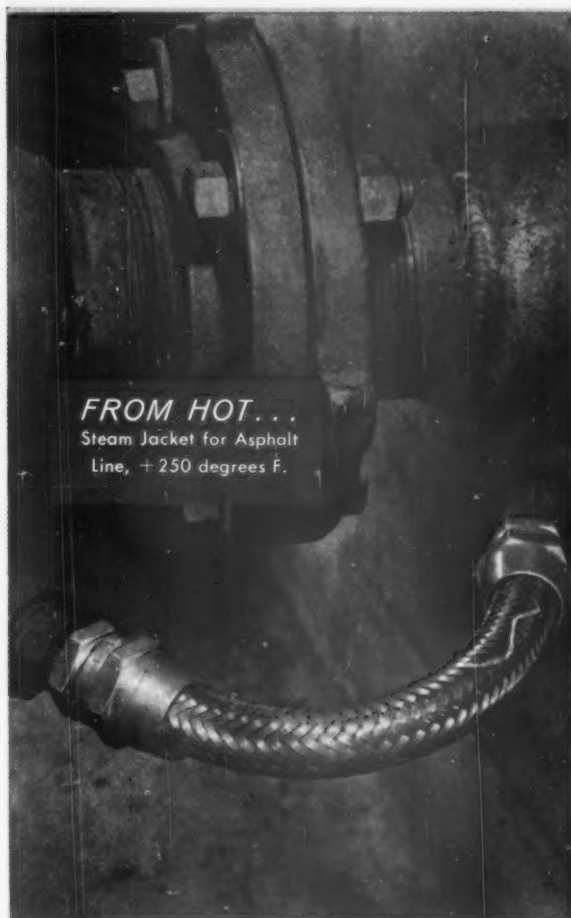
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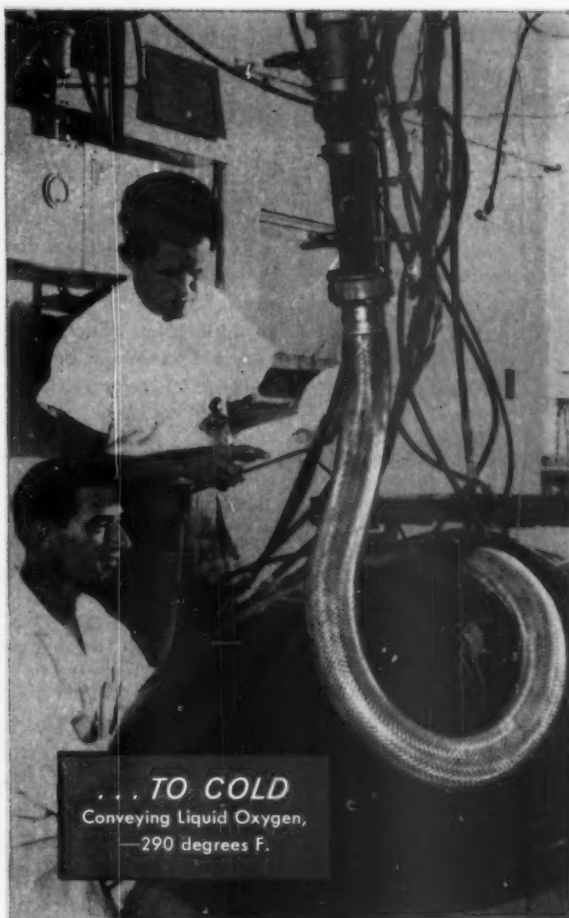


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For More Information Write No. 245 on Inquiry Card—Page 36



## Industry's chemicals:

### WHAT'S MAKING NEWS:

The race is not always to the swift . . . but that's the safest way to bet. In industry's stepped-up race today, it's the speed with which knowledge is absorbed that often spells sales success to the alert manufacturer or processor. Having the latest facts about new chemical products—and new uses for old ones—can be a major factor in determining a firm's course of action. This series aims to provide as many of those facts as possible, quickly and concisely.

You may wish to check certain items in this advertisement and forward to those concerned in your company.

ROUTE TO:

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# Manufacturers clean up with improved industrial solvents

Cleanliness has been extolled by philosophers through the ages . . . but the ancients had no conception of the importance which it would have in a modern metalworking plant. In an auto plant, for example, literally *thousands* of metal parts must be cleaned, thoroughly and rapidly, for every car that comes off the line. Fortunately, modern industrial solvents do the job with amazing efficiency.

Industrial metal cleaning must be meticulously *thorough* to provide a perfect surface for finishes. It must be *rapid* to keep up with today's fast-moving assembly lines. Modern technological progress has made the development of more efficient, fast-acting

cleaning solvents imperative. Meeting the challenge are Chlorothene®, trichloroethylene, perchloroethylene and methylene chloride—products of creative solvent chemistry at Dow.

These Dow solvents with the jaw-breaking names have helped accelerate

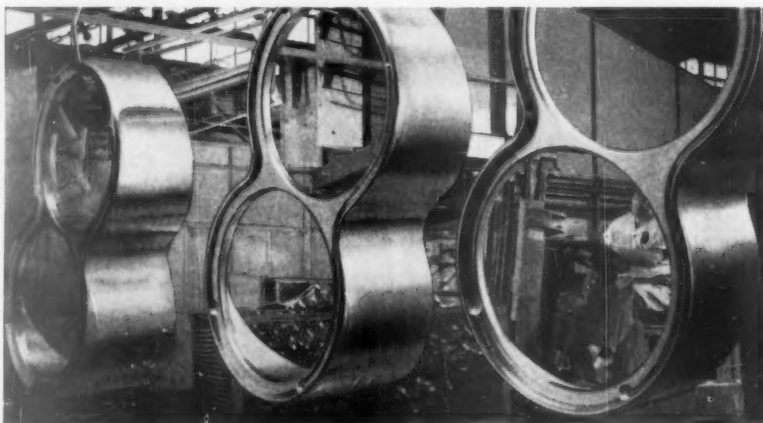
the production process in factories across the country. Sold through Dow solvents distributors and used in cold and hot cleaning applications, they constitute America's broadest line of industrial solvents.

**Chlorothene**, an exclusive Dow product, is a superior cold cleaning solvent for almost any metal cleaning operation. It is distinguished by its low vapor toxicity. Chlorothene has no flash or fire point, reduces plant fire hazard to a minimum.

**Or take trichloroethylene**, another chlorinated solvent from Dow. It's very effective against oils, greases, waxes and tars. It will not attack steel, copper, brass or other metals. Its use as a vapor degreasing solvent results in a substantial economy in heat requirement since it boils with only one-sixth the heat required to vaporize water. Long experience indicates low flammability and nonexplosive characteristics at ordinary working temperatures. It has a vapor density approximately four and a half times that of air; and its low boiling point (189°F.) facilitates handling of material after degreasing.

**Another Dow solvent, perchloroethylene**, has a high boiling point (250°F.) which makes it ideal for cleaning pieces which are porous or have deeply recessed parts or blind holes. The high temperature also ensures complete drying, of special importance to the metal plating industry.

Whatever the cleaning operation re-



Modern metalworking operations call for rapid and thorough cleaning of thousands of small parts. Dow industrial solvents do the job right—maximum efficiency, minimum cost.



quired, Dow has a solvent to do the job right. Metal parts cleaned with these solvents make the hound's tooth simile obsolete.

## BROMINE

**Veteran chemical still very much in style**

Bromine has been around a long time (it was Dow's first product, back in 1897) but it has never gone out of style. Dow marketed 14 brominated products in 1899, has 110 today.

A hard working, highly adaptable chemical, bromine has plenty of pluses: fire-retardant properties, germicidal value, high specific gravity and, not least, Dow provides a plentiful source of supply.

An outstanding swimming pool purifier (no smell, no smart!), it is also the backbone of many pharmaceutical products and plays an important part in most of the new synthetic lubricants and soap germicides.

Bromine is used in a hundred other ways, too. Zinc bromide, for example,



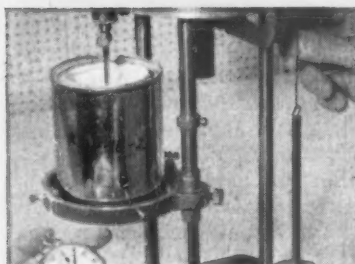
Bromine, oldest Dow product, has a hundred vital uses in every field from photography to atomic research.

is as effective as concrete in shielding scientists from lethal gamma rays, yet transmits light without distortion, thus makes a perfect "atomic window". In photography, it has played vital roles in everything from snapshots to wide screen movies, photoengraving and X-ray. It controls algae and slime, attacks automobile engine deposits.

Truly, bromine is not only a veteran but also a mature pro with the zip of a rookie. Dow is the best source for both bromine and valuable advice on how to use it.

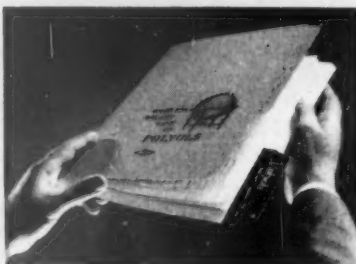
## Other Dow Chemicals

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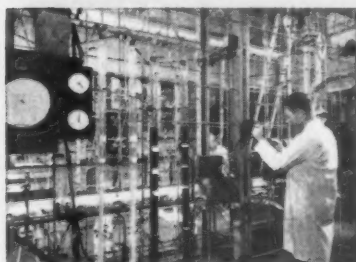
### METHOCEL®

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### PENTACHLOROPHENOL

This 50 by 200 foot warehouse was built in one month's time for Granite Board, Inc., Goffstown, New Hampshire. Wooden penta-treated poles reduced cost, made completed warehouse economical.

## DOWTHERM

**Where there's heat, there's no fire**

Heat is basic in the modern industrial process. Many manufacturing and processing firms simply could not exist without it. But heat has always meant danger—direct fire is difficult to control, steam generates too much pressure at high temperature. Now, Dowtherm® A has taken the hazard out of high heat.

Used by food processors, oil companies, chemical firms and countless others, Dowtherm A provides heat which can be pinpoint-controlled to within a fraction of a degree. It's the most efficient heat transfer medium between 350°F. and 750°F. (Steams build 3,000 lbs. pressure at 700°F., Dowtherm a mere 110 lbs. at the same temperature!)

It's economical, too. New equipment is usually needed but one paint and varnish manufacturer reports his equipment will pay for itself in five years in savings on fire insurance premiums alone. A food processor says he'll do it in three, just on fuel savings.

When things get hot, Dowtherm offers a better end product with efficiency, accuracy and increased safety.

★ ★ ★ ★

If you would like to know more about any of the chemicals mentioned here (or any other Dow chemicals), write to THE DOW CHEMICAL COMPANY, Midland, Michigan, Chemicals Merchandising Department 604EE6-22.

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Midland, Michigan



**For the name of  
your local distributor  
of Dow solvents**

**turn the page**



## Association News



Cliff Brown moderates materials management panel featuring (l. to r.) D. M. Baker, Day-Brite Lighting; H. Lurtz, Nooter Corp.; H. Garrett, Wagner Electric; and C. F. Hellweg, Moloney Electric.

## St. Louis Association Forum Huge Success

**T**HE seventh annual—and most successful—Purchasing Forum of The Purchasing Agents Association of St. Louis was held on April 28 at Washington University. Theme of the meeting was "Where Do We Go From Here?" Jim Tyler, president of the association, presided.

Featured at the afternoon session were Paul V. Farrell, editor

of PURCHASING Magazine, and a panel of purchasing executives from the St. Louis area. Mr. Farrell spoke on value analysis and with the assistance of session chairman Bill East, Monsanto Chemical Co., moderated a workshop session that followed. The panel, moderated by Cliff Brown, Joy Mfg. Co., discussed various aspects of materials management

as practiced in their companies.

Stuart F. Heinritz, senior editor of PURCHASING, was the principal speaker at the evening banquet session. Mr. Heinritz spoke on the "Purchaser's Job in Management." Twenty graduates of the Washington University purchasing class received certificates of achievement following the banquet session.



Stuart Heinritz, Senior Editor of Purchasing Magazine, describes purchasing's role in management.



Editor Paul Farrell rebuts false assumptions about value analysis.

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GRAND JUNCTION—C. D. Smith Co., Chemical Div. (CPT)

**CONNECTICUT**  
NEW HAVEN—H. Kraft and Company, Inc. (PT)  
SHELTON—Aston-Cross Company (CMPT)  
SOUTH NORWALK—McKesson and Robbins, Inc. (CMPT)  
SOUTH NORWALK—Guard-All Chemical Company (PT)

**FLORIDA**  
JACKSONVILLE—F. H. Ross and Company (CMPT)  
JACKSONVILLE—Amica Burnett Chemical Co. (CMPT)  
MIAMI—Amica Burnett Chemical Company (CMPT)  
MIAMI—Biscayne Chemical Laboratories (CMPT)  
ORLANDO—Atlantic Chemicals, Inc. (CMPT)  
TAMPA—Atlantic Chemicals, Inc. (CMPT)

**GEORGIA**  
ATLANTA—Chapman Chemical Company (T)  
ATLANTA—McKesson and Robbins, Inc. (CMPT)  
ATLANTA—F. H. Ross and Company (CMPT)  
ATLANTA—Southern States Chemical Company (CMPT)  
BIRMINGHAM—Chapman Chemical Company (T)  
COLUMBUS—F. H. Ross and Company (CMPT)  
DUBLIN—Textile Aniline Chemical Company (T)

**IDAHO**  
BOISE—Van Waters and Rogers, Inc. (CMPT)

**ILLINOIS**  
AURORA—River Valley Chemicals Inc. (CMPT)  
CHICAGO—Central Solvents and Chemicals (CMP)  
CHICAGO—C. P. Hall Company (CMPT)  
CHICAGO—Keystone Aniline and Chemical Co. (CP)  
CHICAGO—McKesson & Robbins, Inc. (CMPT)  
CHICAGO—Joseph Turner and Company (CMPT)  
DECATUR—McKesson & Robbins, Inc. (CMPT)  
EFFINGHAM—Wabash Independent Oil Company (CPT)  
PEORIA—McKesson & Robbins, Inc. (CMPT)  
ROCKFORD—Industrial Oil and Chemical Company (C)  
ROCKFORD—Viking Chemical Company (CMPT)

**INDIANA**  
EVANSVILLE—Charles Leich and Company (P)  
FT. WAYNE—Hoosier Solvents and Chemicals (CMP)  
FT. WAYNE—Inland Chemical Corporation (CMPT)  
HAMMOND—Inland Chemical Corporation (CMPT)  
INDIANAPOLIS—Hoosier Solvents and Chemicals (CMPT)  
INDIANAPOLIS—Wm. Lynn Chemical Company (CMP)  
INDIANAPOLIS—Lynn Solvents Corporation (T)  
INDIANAPOLIS—Ulrich Chemical Company, Inc. (T)  
KOKOMO—Plating Products, Inc. (PT)  
LOGANSPOUT—Plating Products, Inc. (PT)  
SOUTH BEND—Inland Chemical Corporation (CMPT)  
SOUTH BEND—Stevens Oil Company (CMPT)

**IOWA**  
BETTENDORF—Barton Naptha Corporation (CMPT)  
BURLINGTON—McKesson and Robbins, Inc. (CMPT)  
CEDAR RAPIDS—McKesson and Robbins, Inc. (CMPT)  
COUNCIL BLUFFS—Barton Solvents, Inc. (CMPT)  
DAVENPORT—McKesson & Robbins, Inc. (CMPT)  
DES MOINES—Barton Naptha Corporation (CMPT)  
SIOUX CITY—McKesson and Robbins, Inc. (P)  
SUMNER—Overton Chemical Sales (C)

**KANSAS**  
WICHITA—Barada and Page, Inc. (CM)  
WICHITA—Reid Supply Company (CPT)

**KENTUCKY**  
LOUISVILLE—Dixie Solvents and Chemicals (CMPT)  
LOUISVILLE—Gons Chemical and Supply Company (P)  
LOUISVILLE—McKesson and Robbins, Inc. (CMPT)

**LOUISIANA**  
BATON ROUGE—Barada & Page, Inc. (C)  
LAKE CHARLES—Barada and Page, Inc. (CM)  
NEW ORLEANS—Barada & Page, Inc. (C)  
NEW ORLEANS—Southern Solvents and Chemicals (CMPT)

**MAINE**  
LEWISTON—Polar Chemical Company (CMPT)

**MARYLAND**  
BALTIMORE—B. J. Howard Company (CMPT)  
BALTIMORE—Leidy Chemicals Corporation (CMP)

**BALTIMORE**—Sailer Chemicals (C)  
**BALTIMORE**—Tilley Chemical Company (T)

**MASSACHUSETTS**  
BOSTON—Howe and French, Inc. (CM)  
BOSTON—Linder and Company, Inc. (CMPT)  
BOSTON—McKesson and Robbins, Inc. (CMPT)  
EVERETT—Sessions-Gifford Co., Inc. (CMPT)  
FRAMINGHAM—Aston-Cross Corp. of Mass. (CPT)  
HINGHAM—Stephen-Roger, Incorporated (CMPT)  
HOLYOKE—Eastern Chemicals, Inc. (M)  
SPRINGFIELD—Chemical Corporation (CMPT)  
SPRINGFIELD—Hamden Color and Chemical Co. (CMPT)  
STONEHAM—George Mann & Co. (CMPT)  
WORCESTER—George H. Clark and Co. (CMPT)

**MICHIGAN**  
DETROIT—Eaton Chemical and Dyestuff (CM)  
DETROIT—Manpro Corporation (CMPT)  
DETROIT—McKesson and Robbins, Inc. (CMPT)  
DETROIT—Western Solvents and Chemicals (CMPT)  
DETROIT—Whitfield Chemical Company (P)  
EAST DETROIT—Sherwood Chemical Company (P)  
ESCANABA—Haviland Products Company (CMPT)  
FERNDALE—Manpro Corporation (CMPT)  
GRAND RAPIDS—P. B. Gast and Sons Company (C)  
GRAND RAPIDS—Haviland Products Company (CM)  
GRAND RAPIDS—Wolverine Solvents and Chemicals Co. (CMPT)

**LANSING**—Carrier Stephens Company (CP)  
**LANSING**—Wheaton Chemical Company (CPT)  
**LUDINGTON**—P. B. Gast and Sons Company (C)

**MINNESOTA**  
MINNEAPOLIS—W. H. Barber Company (PT)  
MINNEAPOLIS—McKesson and Robbins, Inc. (CMPT)  
MINNEAPOLIS—Trippel Refining Corporation (MPT)  
ST. PAUL—Lyons Chemicals, Inc. (CMPT)

**MISSISSIPPI**  
JACKSON—F. H. Ross and Company (CMPT)

**MISSOURI**  
KANSAS CITY—Barada and Page, Inc. (CM)  
KANSAS CITY—Missouri Solvents and Chemicals (CMPT)  
KANSAS CITY—Shaw-Wood and Company, Inc. (CMPT)  
ST. LOUIS—Barada and Page, Inc. (CM)  
ST. LOUIS—Independent Oil Company (CMPT)  
ST. LOUIS—McKesson and Robbins, Inc. (CMPT)  
ST. LOUIS—G. S. Robins and Company (CMPT)  
ST. LOUIS—St. Louis Solvents and Chemicals (CPT)  
ST. LOUIS—Missouri Solvents and Chemicals (CMPT)

**NEBRASKA**  
OMAHA—Barton Solvents, Inc. (CMPT)  
OMAHA—McKesson and Robbins, Inc. (CMPT)

**NEW JERSEY**  
BLOOMFIELD—McKesson & Robbins, Inc. (CMPT)  
CAMDEN—Callahan Chemical Company (MPT)  
EAST PATERSON—Aetna Color and Chemical Company (CMPT)  
MURRAY HILL—American Mineral Spirits (CMPT)  
NEWARK—American Oil and Supply (CP)  
NEWARK—National Oil and Supply Company (CMPT)  
PALISADE PARK—Philip A. Hunt Company (C)  
VINELAND—Liria Chemical Company (CT)

**NEW MEXICO**  
ALBUQUERQUE—Braun Chemical Company (CMPT)  
ALBUQUERQUE—Edmunds Chemical Company (CMPT)

**NEW YORK**  
ALBANY—Eastern Chemical (CMPT)  
ATHENS—Spick Products Company (PT)  
BINGHAMTON—Collier Chem. (CM)  
BRONX—Elex Solvents Corporation (MPT)  
BROOKLYN—Ensaquit Chemical Company (CP)  
BUFFALO—Buffalo Solvents and Chemicals (CMPT)  
BUFFALO—Chemical Sales Corporation (CMPT)  
BUFFALO—McKesson and Robbins, Inc. (CMPT)  
EDGEWATER—Hogan Industrial Supply (PT)  
GLOVERSVILLE—Eastern Chemicals, S. H. Ireland Div. (CM)  
KEARNY—American Chemicals, Incorporated (CMPT)  
LONG ISLAND CITY—Peerless Oil and Chemical (CMPT)  
NEW YORK—American Chemicals, Inc. (CMPT)  
NEW YORK—McKesson and Robbins, Inc. (CMPT)  
POUGHKEEPSIE—Duso Chemical Company (C)  
RENSSELAER—Eastern Chemicals, Inc. (CM)  
ROCHESTER—Chemical Sales Corporation (CMPT)  
SYRACUSE—Eastern Chemicals, Inc. (CM)  
UTICA—Manarck Laboratories (CMPT)

**NORTH CAROLINA**  
CHARLOTTE—F. H. Ross and Company, Inc. (CMPT)  
CHARLOTTE—Moreland Chemical Company (CMPT)  
CHARLOTTE—Southern States Chemical Co. (CMPT)  
GREENSBORO—F. H. Ross and Company, Inc. (CMPT)

**OHIO**  
AKRON—Farley Solvents Company (CMPT)  
AKRON—C. P. Hall Company (CPT)  
CANTON—Bison Corporation (CP)  
CINCINNATI—Amso Solvents and Chemicals (CMPT)  
CINCINNATI—Chipman Supply Company (T)  
CINCINNATI—Herbert Chemical Company (PT)  
CINCINNATI—McKesson and Robbins, Inc. (CMPT)  
CLEVELAND—Man-Gill Chemical Company (CPT)  
CLEVELAND—McKesson and Robbins, Inc. (CMPT)  
CLEVELAND—National Solvents Corporation (CPT)  
CLEVELAND—Ohio Solvents and Chemicals, Inc. (CMPT)

**CLEVELAND**—R. W. Renton Company (CPT)  
**COLUMBUS**—McKesson and Robbins, Inc. (CMPT)  
**DAYTON**—Industrial Chemical Products Co. (CMPT)  
**DAYTON**—Otison Solvents, Inc. (T)  
**UMA**—Thomson Chemical Company (CPT)  
**TOLEDO**—Inland Chemical Co. (CMPT)  
**TOLEDO**—Toledo Solvents and Chemicals (CMPT)  
**TOLEDO**—M. I. Wilcox Company (CPT)  
**YOUNGSTOWN**—Rhel Supply Company (CMPT)

**OKLAHOMA**  
OKLAHOMA CITY—Barada and Page, Inc. (CM)  
TULSA—Barada and Page, Inc. (CM)  
TULSA—Chemical Products, Inc. (CMPT)

**OREGON**  
PORTLAND—Van Waters and Rogers (CMPT)

**PENNSYLVANIA**  
CONSHOHOCKEN—American Mineral Spirits (CMPT)  
EASTON—Lehigh Valley Chemical Company (CMPT)  
ERIE—Monarch Laboratories (T)  
McKEES ROCK—Apex Soap and Sanitary Corp. (CPT)  
PHILADELPHIA—Alex C. Farguson Company (CPT)  
PHILADELPHIA—McKesson and Robbins, Inc. (CMPT)  
PHILADELPHIA—Phillips and Jacobs, Inc. (CM)  
PHILADELPHIA—Pioneer Salt Company (CMPT)  
PHILADELPHIA—George Senn, Inc. (CMPT)  
PITTSBURGH—Carmac Chemical Company, Inc. (CP)  
PITTSBURGH—Carmac-Pittsburgh Company (CPT)  
PITTSBURGH—Dacar Chemical Products Company (CPT)  
PITTSBURGH—F. Pitt Chemical Company (CMPT)  
PITTSBURGH—McKesson and Robbins, Inc. (CMPT)  
READING—R. W. Ecken, Inc. (CPT)  
READING—Textile Chemical Company (CP)  
SCRANTON—Scranton Chemical Company (CPT)  
YORK—Industrial Solvents and Chemicals (CPT)

**RHODE ISLAND**  
PROVIDENCE—George Mann and Company (CMPT)  
PROVIDENCE—Sessions-Gifford Company, Inc. (CMPT)

**SOUTH CAROLINA**  
CHARLESTON—Burris Chemical Company (CPT)  
GREENVILLE—F. H. Ross & Company (CMPT)  
GREENVILLE—Southern States Chemical Co. (CMPT)  
SPARTANBURG—Moreland Chemical Company, Inc. (CMPT)

**TENNESSEE**  
CHATTANOOGA—Chapman Chemical Co. (CMPT)  
CHATTANOOGA—Wilson Sales Company (CMPT)  
KINGSPORT—Chem-I-Dent, Inc. (CPT)  
MEMPHIS—Chapman Chemical Company (CMPT)  
MEMPHIS—C. P. Hall Company (CMPT)  
MEMPHIS—Ideal Chemical and Supply Co. (CMPT)  
NASHVILLE—Chapman Chemical Company (CMPT)  
NASHVILLE—Wilson Sales Company (CMPT)

**TEXAS**  
AMARILLO—State Chemical Company (CMPT)  
AUSTIN—R. M. Hughes Company, Inc. (CMPT)  
BEAUMONT—Arthur Dooley and Son (CMPT)  
CORPUS CHRISTI—Barada and Page, Inc. (CM)  
DALLAS—Barada and Page, Inc. (CM)  
DALLAS—McKesson & Robbins, Inc. (CMPT)  
DALLAS—Texas Solvents and Chemicals Co. (C)  
DALLAS—Van Waters and Rogers, Inc. (CMPT)  
EL PASO—Baron Chemical Company (CMPT)  
EL PASO—Braun Chemical Company (CMPT)  
EL PASO—Mine and Smelter Supply Company (P)  
FORT WORTH—Barada and Page, Inc. (CM)  
FORT WORTH—Worth Chemical Products Co. (CMPT)  
HOUSTON—Barada and Page, Inc. (CM)  
HOUSTON—W. H. Curtin and Company (P)  
HOUSTON—Dixie Chemical Company (CMPT)  
HOUSTON—R. M. Hughes Company, Inc. (CMPT)  
HOUSTON—McKesson, Texas Chemical Division (CMPT)  
HOUSTON—Texas Solvents and Chemicals Co. (CMPT)  
HOUSTON—Van Waters and Rogers, Inc. (CMPT)  
LUBBOCK—State Chemical Company (CMPT)  
MIDLAND—State Chemical Company (CMPT)  
ODESSA—Barada and Page, Inc. (CM)  
SAN ANTONIO—R. M. Hughes Company, Inc. (CMPT)  
SAN ANTONIO—McKesson and Robbins, Inc. (CMPT)

**UTAH**  
SALT LAKE CITY—Braun-Knecht-Heimann Co. (CMPT)

**VIRGINIA**  
NORFOLK—Taylor Sulf and Chemical Company (CPT)  
RICHMOND—Phipps and Bird, Inc. (CMPT)  
ROANOKE—Hawmaer Supply Company (CMPT)

**WASHINGTON**  
SEATTLE—Van Waters and Rogers, Inc. (CMPT)  
SPOKANE—Van Waters and Rogers, Inc. (CMPT)

**WEST VIRGINIA**  
CHARLESTON—B. Preiser and Company (CMPT)  
FAIRMONT—Fairmont Machinery, Fairmont Supply (CPT)  
HUNTINGTON—Cabell Chemical Company (CPT)

**WISCONSIN**  
CHIPPEWA FALLS—Lyons Chemical (CMPT)  
LA CROSSE—North Central Chemical, Inc. (MPT)  
LA CROSSE—Wisconsin Solvents & Chemicals Corp. (CMPT)  
MADISON—North Central Chemicals (CMPT)  
MILWAUKEE—McKesson and Robbins, Inc. (CMPT)  
MILWAUKEE—Wisconsin Solvents and Chemicals (CMPT)  
WAUKESHA—Fred Portz and Son (CT)

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Available in colors.

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For More Information Write No. 248 on Inquiry Card—Page 36

## Association News

### Large Turnout For British Columbia Meeting

President Sid Elkington of the Purchasing Agents Association of British Columbia made the first order of business the introduction of new members. The large crowd welcomed: C. S. Brown, purchasing agent, R. Smith & Co., Ltd.; and Dave Hogg, purchasing agent for Straits Towing.

Program Chairman Bob Norris introduced the featured speaker, Archie McColl, purchasing agent for Westcoast Transmission Co. Ltd., who delivered a talk entitled, "Development of the North."

Mr. McColl spoke of the tremendous storage of wealth that lies in the northern reaches of British Columbia and Alberta. Large mineral deposits, great timber stands, oil and natural gas fields, and a rich agricultural area of the Peace River.

To supplement the talk a color film showing the development of the north and the construction of the gas pipe line from the Peace River area to the Fraser Valley was shown. The film entitled, "From the Peace to the Pacific" was an exciting picture to see.

Don Blane, purchasing agent for Inland Natural Gas Co. presented a short talk on his company's operations.

### British Columbia P.A.'s Hold Annual Election

The Purchasing Agents Association of British Columbia recently held their annual election of officers for 1959-60.

W. R. Norrie, General Construction Co. Ltd. was elected president. Serving with him will be: R. P. Husband, Deeds McBride, Ltd. as first vice president; H. E. Wirick, Weston Bakeries Ltd., second vice president; V. R. Steele, Automatic Electric Sales Ltd., secretary; and L. Sturkey, Canadian Western Pipe Mills Ltd., treasurer.

A plant visit in May to Carlings Breweries was arranged by Bill Jackson, plant visit chairman.

PURCHASING



# Cut matching problems

Strong, stable V-belts reinforced with **DACRON**<sup>®</sup>  
POLYESTER FIBER  
stay matched on shelf or drive... here's why:



**DIMENSIONAL STABILITY** of V-belts reinforced with DACRON means that belts won't stretch or shrink in storage. Less time is spent in matching belts, and inventory is kept at minimum.



**LONGER FLEX LIFE OF "DACRON"** keeps drive running smoothly after many months of constant operation. Greater stability eliminates costly downtime for adjustments.

**QUICK, POSITIVE MATCHING** is possible when you use V-belts reinforced with DuPont DACRON\* polyester fiber. Low moisture regain of DACRON is only 0.4%—or 1/20th that of conventional fiber. This assures dimensional stability despite humidity changes. Belts stay matched for fast installation. Greater uniformity means each V-belt of DACRON carries an equal share of the load.

For lower drive and maintenance costs, make

sure the belts you use are reinforced with Du Pont DACRON. Du Pont makes the DACRON fiber used by belt manufacturers in producing their finest-quality belts. E. I. du Pont de Nemours & Co. (Inc.), 5518 Nemours Bldg., Wilmington 98, Del.

\* \* \*

**FREE BOOKLET** tells the full story of how you save maintenance costs with V-belts reinforced with DACRON. For your copy, fill out and mail the coupon below.

\*"Dacron" is Du Pont's registered trademark for its polyester fiber.

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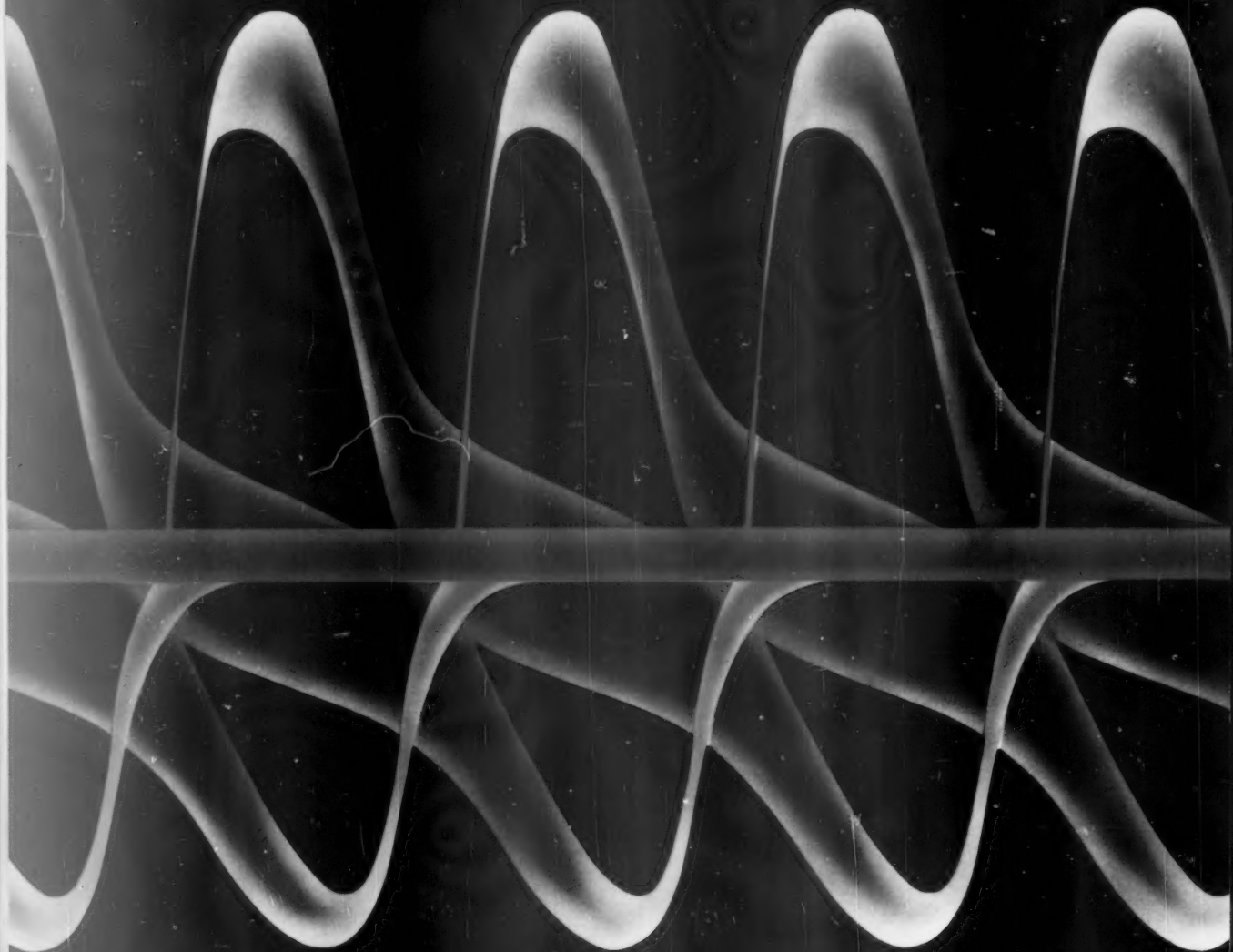
E. I. du Pont de Nemours & Co. (Inc.)  
Textile Fibers Department  
5518 Nemours Building  
Wilmington 98, Delaware

Name \_\_\_\_\_ Title \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



The cathode ray oscilloscope is one of science's and industry's most perceptive instruments for determining uniformity of operation. The pattern reproduced here is a harmonically modulated sine wave of exact uniformity.

## Uniformity is **Malleable**

Just as the input of an oscilloscope can be controlled to produce repetitive patterns, so can consistently uniform metal parts be produced with Malleable iron because of modern, scientific controls. The unique method by which all Malleable castings are made and the exacting techniques employed by Malleable foundries assure Malleable users of castings that are uniform, part after part, regardless of size or shape. This uniformity, combined with unparalleled physical and

mechanical properties, ideally suits Malleable castings for modern America's quality products.

For information or service, call on one of the progressive firms that identify themselves with this symbol—



If you wish, you may inquire direct to the Malleable Castings Council, Union Commerce Building, Cleveland 14, Ohio, for information.

## Better Products at Lower Cost Result From Malleable Uniformity Controls

Uniform quality — whether for five or five million pieces — is essential to maintain product quality and increase manufacturing efficiency. With accelerating

frequency, Malleable castings contribute their unique uniformity in critical applications where durable, reliable components are necessary.

### Key to Uniformity is Control

Malleable iron is produced under closely controlled manufacturing techniques. From charge composition and molding sand properties, through final inspection,

every critical factor is held constant by using the most modern techniques of metal analysis, process control and inspection.

### Internal Uniformity

This versatile engineering material is achieved through converting the base white iron into tough Malleable iron by a controlled heat treating process. Malleable's internal structure exhibits excellent uniformity, an important factor in assuring the dependable performance of intricately designed components.

tion, every critical factor is held constant by using the most modern techniques of metal analysis, process control and inspection.

### External Uniformity

Fundamental to the casting process is the ability to produce a given shape, time after time, in either small or large quantities. Metal can be placed exactly where it is needed . . . eliminated where it is not. Good design — achieved through close cooperation between the customer and

the foundry — can assure the necessary tolerances and the lowest possible finished part cost. Modern techniques of production and inspection are used to insure top quality, dimensionally accurate castings.



The life of every motorist rides in complete safety on Malleable wheel hubs of unerring uniformity.

### Uniformity Proven by Use

The final test of any part is how well it stands up in actual service. Under continuous cyclic and shock loading, the millions of Malleable wheel hubs, which are in service on the front end of every American-made car, have compiled an enviable record of proven uniformity. Another dramatic example of Malleable's uniformity is proved in the old adage "A chain is only as strong as its weakest

link." Miles of Malleable chain, carrying tremendous loads year after year without failure, demonstrate the uniformity of every cast link.

New techniques for controlling every element of Malleable production are the result of intensive research done by Malleable foundries in their continuing search for ways to make Malleable even more versatile and indispensable to industry.

### More Information Available

Your copy of *Data Unit 103—Uniformity* — is available from any member of the Malleable Castings Council. If you

prefer, write direct to Malleable Castings Council, Union Commerce Building, Cleveland 14, Ohio.

These companies are members of the



#### CONNECTICUT

Connecticut Malleable Castings Co., New Haven 6  
Eastern Malleable Iron Co., Naugatuck  
New Haven Malleable Iron Co., New Haven 4

#### DELAWARE

Eastern Malleable Iron Co., Wilmington 99

#### ILLINOIS

Central Fdry. Div., Gen. Motors, Danville  
Chicago Malleable Castings Co., Chicago 43  
Moline Malleable Iron Co., St. Charles  
National Malleable and Steel Castings Co., Cicero 50  
Peoria Malleable Castings Co., Peoria 1  
Wagner Castings Company, Decatur

#### INDIANA

Link-Belt Company, Indianapolis 6  
Muncie Malleable Foundry Co., Muncie  
Terre Haute Malleable & Mfg. Corp., Terre Haute

#### MASSACHUSETTS

Belcher Malleable Iron Co., Easton

#### MICHIGAN

Albion Malleable Iron Co., Albion  
Auto Specialties Mfg. Co., Saint Joseph  
Cadillac Malleable Iron Co., Cadillac  
Central Fdry. Div., Gen. Motors, Saginaw

#### MINNESOTA

Northern Malleable Iron Co., St. Paul 6

#### NEW HAMPSHIRE

Laconia Malleable Iron Co., Laconia

#### NEW JERSEY

Meeker Foundry Company, Newark 4

#### NEW YORK

Acme Steel & Malleable Iron Works, Buffalo 7  
Frazer & Jones Company Division  
Eastern Malleable Iron Co., Solvay  
Oriskany Malleable Iron Co., Inc., Oriskany  
Westmoreland Malleable Iron Co., Westmoreland

#### OHIO

American Malleable Castings Co., Marion  
Canton Malleable Iron Co., Canton 5  
Central Fdry. Div., Gen. Motors, Defiance  
Dayton Malleable Iron Co., Ironton Div., Ironton  
Dayton Malleable Iron Co., Ohio Mall. Div., Columbus 16  
Maumee Malleable Castings Co., Toledo 5  
National Malleable and Steel Castings Co., Cleveland 6

#### PENNSYLVANIA

Buck Iron Company, Inc., Philadelphia 22  
Erie Malleable Iron Co., Erie  
Lancaster Malleable Castings Co., Lancaster  
Lehigh Foundries Company, Easton  
Meadville Malleable Iron Co., Meadville  
Pennsylvania Malleable Iron Corp., Lancaster

#### TEXAS

Texas Foundries, Inc., Lufkin

#### WEST VIRGINIA

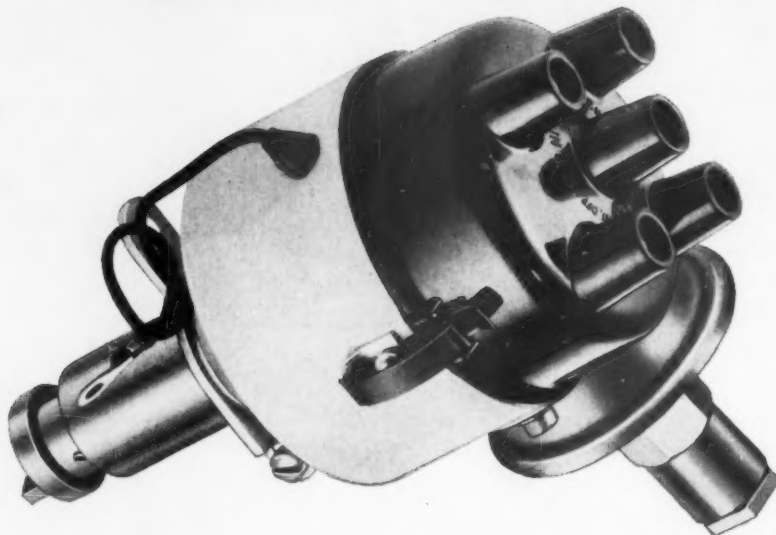
West Virginia Malleable Iron Co., Point Pleasant

#### WISCONSIN

Badger Malleable & Mfg. Co., S. Milwaukee  
Belle City Malleable Iron Co., Racine  
Chain Belt Company, Milwaukee 1  
Federal Malleable Company, West Allis 14  
Kirsh Foundry Inc., Beaver Dam  
Lakeside Malleable Castings Co., Racine  
Milwaukee Malleable & Grey Iron Works, Milwaukee 46

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## SIX NEW IMPROVEMENTS IN DISTRIBUTOR DESIGN



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Now Auto-Lite offers a completely new distributor design. Ignition engineered for 4-, 6- and 8-cylinder automotive and industrial applications, this new, low friction governor distributor is extremely rugged and dependable. Here, for example, are just six of the many advantages of this new distributor:

1. Weight savings of approximately 40% over most other designs
2. Non-corrodible distributor bowl that is salt spray resistant and unaffected by marine and tropical environment
3. Low hysteresis governor advance design for high accuracy of calibration of speed versus spark advance
4. Glass-filled high temperature resin base molded around a powdered iron bearing pedestal
5. Long life lubricated sintered iron cam element and weight element
6. Lubricant capacity six to eight times that of conventional oilers means long life lubrication for the distributor bearings

This unit is available in either vacuum or non-vacuum types and with a variety of precisely engineered seals to prevent penetration of dust, water, or oil.



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GROUP**

THE ELECTRIC AUTO-LITE COMPANY, TOLEDO 1, OHIO

For More Information Write No. 251 on Inquiry Card—Page 36



## AUTO-LITE ENGINEERS ASSIST CUSTOMERS IN THEIR DRIVE FOR PROVEN QUALITY AND LOWER COSTS



Design engineers, purchasing agents and cost-conscious management men in all areas have been quick to take advantage of the new Cost Reduction Program announced by Auto-Lite's Electrical Products Group.

In recent months Auto-Lite Electrical Products Group engineers have traveled thousands of miles to assist customers in their new product development programs.

### Typical example of new service

Typical of this service was the recent flight of Syracuse Division Chief Engineer Art Kaiser to a customer's headquarters in order to confer with engineers working on 1960 models. All it took was this customer's "YES, we would appreciate having one of your engineers take a look at this" and 24 hours later Mr. Kaiser was on hand to add his experience to this customer's engineering staff.

### How you can take advantage of this Service

As a part of the new Auto-Lite Cost Reduction Service, the Electrical Products Group District Managers are at your service. They can tell you how Auto-Lite can make available to you the skills and know-how of its 19 engineering and research laboratories, its manufacturing facilities, and its nationwide service organization. They can help you with your cost reduction and product improvement programs.

### THE ELECTRIC AUTO-LITE COMPANY ELECTRICAL PRODUCTS GROUP • TOLEDO 1, OHIO

Please send me further information on . . .

- |   |   |
|---|---|
| <input type="checkbox"/> Distributors                         | <input type="checkbox"/> FHP DC Motors      |
| <input type="checkbox"/> Pump & Traction Motors               | <input type="checkbox"/> Generators         |
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|   | <input type="checkbox"/> Oil Filled Coils   |

Name

Company  Position

Address

City & State

## Association News

### Northeastern Penna. Holds Last Meeting

William Honan of Handy & Harman spoke at the last regular meeting of N.E. Penna. Assoc. His topic was, "Precious Metals in Industry." He was introduced by the program chairman, Ralph Lewis, Northeastern Pennsylvania National Bank and Trust Co.

### 23 Past Presidents Visit Alabama Assn.

The Alabama Association of Purchasing Agents recently held their annual Executive and Past Presidents Night. Clint Wiberg, first vice president and program chairman, gave a brief history of the Alabama association. He also introduced 23 of the 27 living presidents who attended the meeting.

Carl Thomas introduced the two new members of the association: W. T. Coleman, Mathieson Alabama Chemical Corp., and Thad McEachin, O. R. Radio Industries.

The guest speaker was Bernard A. Monaghan, executive vice president of Vulcan Materials Company. His topic was, "The Growth and Development of Vulcan Materials Company."

One of the features of Mr. Monaghan's talk was his explanation of the publication of a plan of organization and procedures for the entire company. He emphasized the purchasing function and outlined briefly the responsibilities of the manager of purchases and those serving with him in the overall procurement for all divisions.

### Lehigh Valley Inducts New Members

M. B. Eubanks, Jr., director of purchasing and transportation for Riegel Textile Corp. was the featured speaker at a recent meeting of the Purchasing Agents Association of Lehigh Valley.

(Please turn to page 154)

**"LUBRIPLATE  
ENDED OUR  
TRANSMISSION  
TROUBLES"**

says: DAVID TESONE TRUCKING CO.

"After installing larger engines in some of our trucks, we began to experience transmission failures due to faulty lubrication. We tried several types of gear lubricants without success, until we tried LUBRIPLATE APG #140 Gear Lubricant. Then our gear troubles ended. We are also getting outstanding results from LUBRIPLATE 630-2 in chassis and wheel bearings of our 40 heavy duty trucks!"

David Tesone

**REGARDLESS OF THE SIZE AND  
TYPE OF YOUR MACHINERY,  
LUBRIPLATE GREASE AND  
FLUID TYPE LUBRICANTS WILL  
IMPROVE ITS OPERATION AND  
REDUCE MAINTENANCE COSTS.**

LUBRIPLATE is available in grease and fluid densities for every purpose . . . LUBRIPLATE H. D. S. MOTOR OIL meets today's exacting requirements for gasoline and diesel engines.



For nearest LUBRIPLATE distributor see Classified Telephone Directory. Send for free "LUBRIPLATE DATA BOOK" . . . a valuable treatise on lubrication. Write LUBRIPLATE DIVISION, Fiske Brothers Refining Co., Newark 5, N. J. or Toledo 5, Ohio.



For More Information Write No. 252  
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# ANNOUNCING NEW **POWELL**

**Handwheel Nut**—securely holds malleable iron, non-heating handwheel to the stem.

**Protruding Packing Gland**—a Powell feature—compresses the packing, offers additional guidance to the stem, and prevents packing nut from becoming loose and rotating with stem.

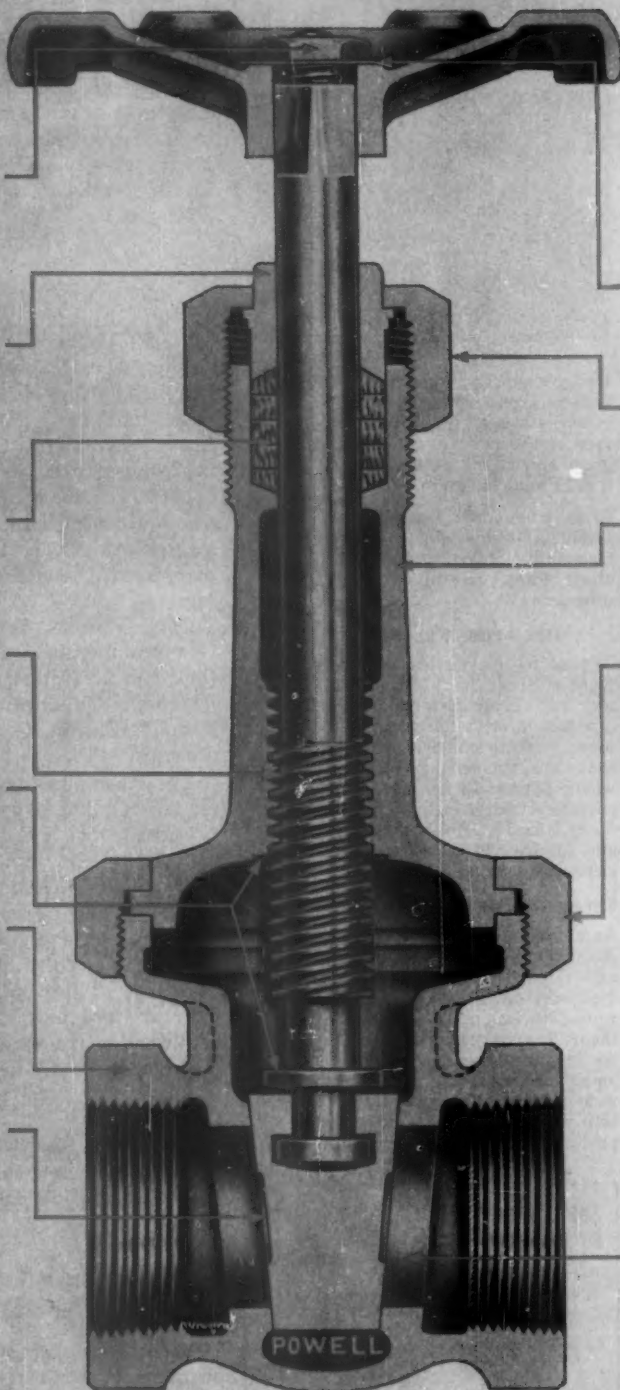
**Deep Stuffing Box**—holds more than ample amount of high-grade steam packing.

**Stem**—is high tensile bronze, extra heavy, of large diameter, with long Acme threaded section.

**Repack-Under-Pressure Seat and Collar**—permit valve to be repacked under pressure when fully open.

**Body**—a high tensile bronze casting, scientifically designed to provide full flow area through the valve.

**Wedges**—Interchangeable Solid or Double Wedges are available in rising stem valves. They are held to stem by a "T" slot, and are accurately guided to valve seats by means of integral cast lugs that travel in female guideways in the valve body. Entirely clearing the waterway, full unobstructed flow through is assured.



**Sectional**—Union Bonnet Rising Stem Gate Valve Fig. 2700—125 pounds, Fig. 2714—150 pounds.

**POWELL...world's largest family of valves**

# BRONZE UNION BONNET GATE VALVES

## for 125 and 150 pounds WSP

These new BRONZE Union Bonnet Gate Valves have many superior features—some of which are outlined here. For complete details, write for new illustrated circular. Or check with your nearest Powell Valve distributor.

Identification Plate—gives Figure Number and kind of valve.

Heavy Hexagonal Packing Nut—for holding gland and adjusting packing.

Long Bonnet—cast of high tensile bronze for long service.

Octagonal Ring Nut—is deep threaded and tightly holds body-bonnet connection. Affords additional wrenching positions.

Ample Space—between seats and end of pipe thread prevents injury to seats when screwing pipe into the body.

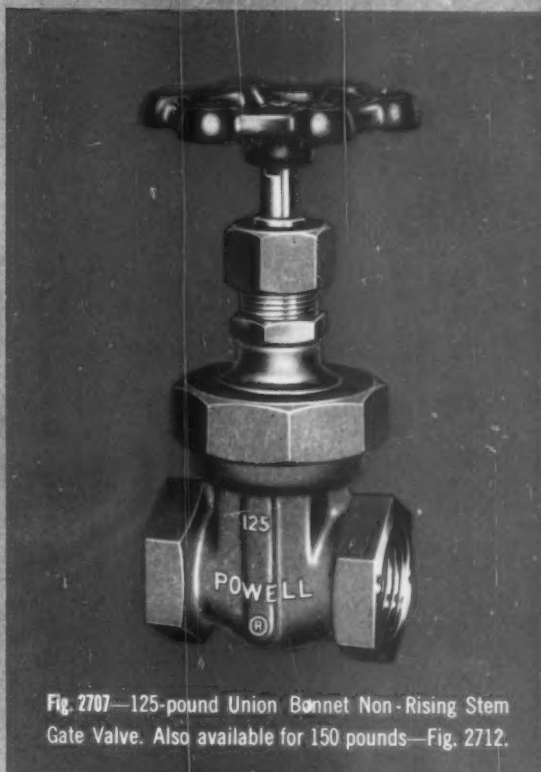
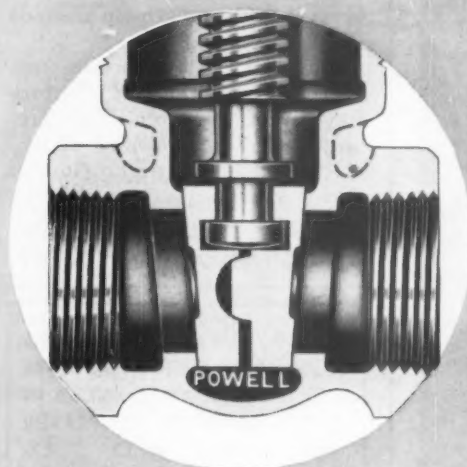
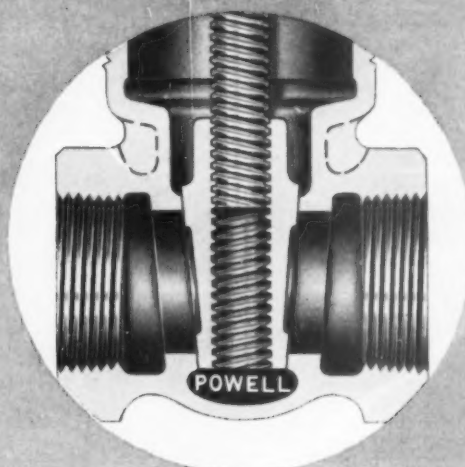


Fig. 2707—125-pound Union Bonnet Non-Rising Stem Gate Valve. Also available for 150 pounds—Fig. 2712.



Detail of Sectional View Inside Screw Rising Stem Gate Valve showing Double Wedge Disc and Integral Seats.



Detail of Sectional View Non-Rising Stem Gate Valve showing Solid Wedge Disc that rises on stem. Integral Seats.

THE WM. POWELL COMPANY • Dependable Valves Since 1846 • Cincinnati 22, Ohio

JUNE 22, 1959

For More Information Write No. 253 on Inquiry Card—Page 36

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# A GOOD PLACE TO BUY YOUR gray iron CASTINGS



**Make It Better with Gray Iron**

**The Forest City Foundries Co.**

2500 WEST 27th STREET

CLEVELAND 13, OHIO

For More Information Write No. 254 on Inquiry Card—Page 36

## Association News

(Continued from page 151)

Chairman of the public relations of Seventh District of the National Association of Purchasing Agents, Mr. Eubank spoke on "Public Relations."

Eight new members were inducted at the meeting. They were: Robert N. Burleigh, General Electric Co.; Ray W. Biondi, Arbogast & Bastian Inc.; Theodore G. Hester, Weller Electric Corp.; Douglas S. Stauffer, Bethlehem Apparatus Co.; Charles D. Isaac, Quaker Chair Corp.; and Robert E. Halpin, Messinger Supply Co. Charles Moyer, Luria Engineering Co. was accepted as an associate member.

### P.A.'s and Salesmen Hold Joint Meeting In Evansville, Indiana

The Purchasing Agents Association of Evansville and the Evansville Sales Executive Club recently held a combined meeting. The meeting was a joint venture in public relations for both associations and was a "top management" night.

Members of both groups invited the top executives of their own companies as guests. Speaker for the evening was Peter T. McKinney of the Public Relations Department, Union Carbide Corp., Chicago.

Mr. McKinney spoke on, "Chemicals, Twentieth Century Revolution," and in addition presented a film, "Petrified River" giving details of peacetime use of atomic energy.

### CLASSIFIED ADVERTISEMENT

REDUCE YOUR INVESTMENT—SELL YOUR METAL OFFICE FURNITURE AND OFFICE MACHINES IN GOOD CONDITION TO A LARGE MANUFACTURER WHO IS EXPANDING.

Write, Box 53,

**PURCHASING,**

205 E. 42nd St., New York 17, N.Y.

For More Information Write No. 255 on Inquiry Card—Page 36→

**PURCHASING**





## We were Page 1 news for a rival paper

"... with faith in our readers..." droned on Publisher Greenleaf.

Well, the old goat had something to be proud of as he gave the dedication speech for the Daily Chanticleer's new, seven-million dollar home. It was absolutely the last word in newspaper plants, with three whole floors devoted to the presses alone—the biggest, fastest, most fully automatic newspaper presses yet created.

"... and with faith in our local industries..." One of which, by the way, was the Almost-as-Good Cable Company, Inc. That's why the plant was wired with *their* power cables instead of the Okonite Cables for which the engineers were plumping.

Anyhow, the speech had to end sometime. And as soon as it did, Greenleaf would push the button, and the first copies of the Chanticleer's special, 200-page New Plant Issue would start whizzing down the chutes into the delivery trucks.

"... and with faith in our devoted advertisers..."

"Oh, push the doggone button," snapped his wife.

So Greenleaf pushed the button—and from somewhere behind the big new presses there came a blinding blue flash.

No edition *that* day.

Twenty minutes later, our newsdealers were giving us what-for on the

phone. An hour later, our devoted advertisers were threatening to sue. And an hour after that, our despised—though Okonite-wired—rival, the Daily Blatt, was running a banner headline: CHANTICLEER LAYS EGG IN NEW ROOST.

Worst of all, we had to run off our next ten issues on *their* presses while our nice new seven-million dollar home was being re-wired...

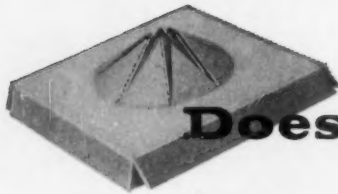
... With good ol' reliable Okonite Cables, of course.

THE OKONITE COMPANY  
Subsidiary of Kennecott Copper Corporation  
Passaic, New Jersey

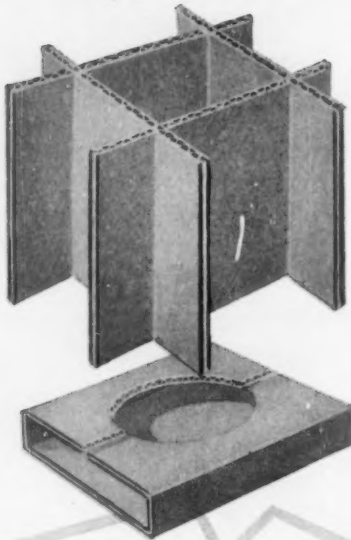


where there's electrical power... there's **OKONITE CABLE**

*What you should know about*



## **Does your corrugated box**



**F**or most products, proper interior packing is one of the most important factors in corrugated container design. Through its careful selection you can often prevent a costly chain reaction of damage claims and rejected shipments.

How much and which types to use will depend primarily on your product, its construction, how it is normally handled and shipped as well as the type of protection needed. You may find, for example, that *anchoring* the contents is paramount. Some packing pieces are made expressly for this purpose. Others *cushion* against impact and vibration. Still others are used to *separate* packed units. A fourth group's primary job is to *suspend* the contents within the container.

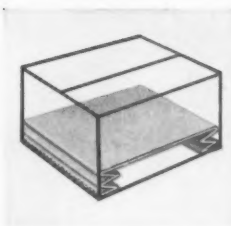
The forms of interior packing are as versatile as the items they protect. A few of the most widely and successfully used types are described here:

### **SPRING PADS**

Like innersprings, these accordion-shaped pads help dissipate and cushion shock. Their buffer action absorbs vibration

*interior packing for Union Boxes.*

## need an "innerspring mattress"?

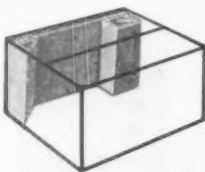


which can cause loosening of parts and actual breakage — particularly where it coincides with the natural frequency of the

packaged product and sets up harmonic resonance.

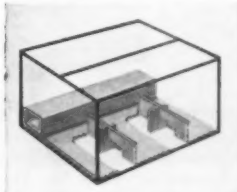
### CORNER PIECES

These units "round off" the corners of the box's interior—provide extra protection at these vulnerable points. They cushion against crushing caused by improper stacking and impact resulting from humping or switching of freight cars, throwing, dropping and other shipping hazards that might squeeze or otherwise damage the contents.



### DIE CUT SHEETS

Die cut inner packing comes in an almost limitless range of shapes, sizes, thicknesses. It can be made to perform practically any protective function. The pieces nearly always are tailored around the product—usually a fragile article, an item of irregular shape or one of unbalanced construction. Die cut inner packing is being used increasingly today because of the wide variety of items now shipped in corrugated containers.



Interior safeguards recommended or developed by Union-Camp are saving many companies thousands of dollars annually in packaging costs. Not to mention untold dollars that have been saved through the elimination of shipping damage. Whatever your product, your Union Box representative will be glad to work with you in determining the most efficient and economical approach to your particular packaging operation.



Write for free, informative booklet "Interior Packing of Corrugated Boxes"

# UNION BOXES

UNION BAG-CAMP PAPER Corporation

233 BROADWAY, NEW YORK 7, N. Y.

**Factories:** Savannah, Ga.; Trenton, N.J.; Chicago, Ill.; Lakeland, Fla.

**Sales Offices:** Eastern Division—1400 E. State Street, Trenton, N.J.  
Southern Division—P.O. Box 570, Savannah, Ga.; P.O. Box 454, Lakeland, Fla.  
Western Division—4545 W. Palmer, Chicago, Ill.

# INDUSTRIAL FELT

to your  
specifications  
in stock

\*Industrial Felt — in Wool Felts or new Synthetic Fiber Felts — all weights, widths, colors, etc. — and made to S.A.E. and Federal Gov't. Specifications... available die-cut to your requirements. Large diversified inventory insures prompt delivery!

**FREE**

See how FELT fits in with your products. Write for Booklet E-2 which contains samples and applications of Industrial Felt.



CONTINENTAL FELT COMPANY, 1903  
22-26 WEST 15th STREET NEW YORK 11, N. Y.

For More Information Write No. 257  
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## Association News



**TENNEVA ASSOCIATION**—Newly elected officers include (left to right) Bob Woodham, Tennessee Eastman Company, Kingsport, Tenn., vice president; Ralph McCoy, Kingsport Press, president; Marshall Whisnant, Holston Valley Community Hospital, treasurer; and Bob Simmons, Graybar Electric Company, Bristol, Tenn., national director. Bob Prye, Brunswick-Balke-Collender Co., Marion, Va. was not present when the picture was taken.

## You Get **MORE** with **DOERR MOTORS**



**QUALITY...**  
Top performance and life.  
**APPEARANCE...**  
Compliments your product.  
**DESIGN SERVICE...**  
Solves toughest problems.  
**COOPERATION...**  
Even on small-lot orders.

**YOUR PRODUCTS** are easier to produce... easier to sell... with a Doerr motor as original equipment.

Got a problem? Doerr's experience with thousands of "specials" suggests quick, economical answers. Our broad background helps develop practical new designs to fit all of your requirements at lowest cost.

Also, Doerr quality construction assures full performance of your product... while compact, modern Doerr styling adds to appearance.

### CALL DOERR WHEN YOU NEED MOTORS

On your next call for motors, get MORE...contact DOERR! Expanded line includes ratings from 1/30 to 15 hp. Specials are our specialty—backed by nation-wide, expert field service. Phone Cedarburg 801 or write...



90 N. FOURTH AVE. • CEDARBURG, WIS.

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## Purchasing Agents

Watching  
Replacement  
Costs  
Specify

### PROTO TOOLS



Proto Power and Impact Sockets, available in 1/4", 3/8", 1/2", 5/8", 3/4", and 1" square drive. Openings from 3/16" to 3 1/2". Full assortment attachments and adapters. Larger sizes, special designs to your order. Meet Fed. Spec. GGG-W-660. Pages 21-27 in Proto Catalog give full details and dimensions.

Proto manufactures more than 2172 professional tools for all industries; guaranteed to do their jobs. Highest standards of forging, heat treat, and finishing in special analysis alloy steels.



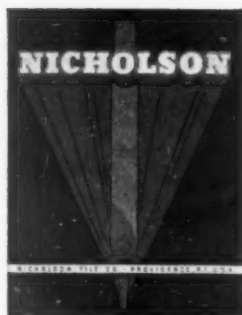
2215 Santa Fe Avenue  
Los Angeles 54, California  
515 Allen Street  
Jamestown, New York  
1715 Oxford East  
London, Ontario, Canada

PROTO IS A DIVISION OF  
PENDLETON TOOL INDUSTRIES, INC.

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PURCHASING





**Fastest way to find any *file*.** There isn't a file you can't find and get fast. First look in your Nicholson or Black Diamond Catalog. Then call your Nicholson or Black Diamond Industrial Distributor. • There are thousands of different files. There are General Purpose varieties for the usual kind of work. There are Special Purpose files to improve the work on specific materials—brass, lead, aluminum and steels, for example. Your Nicholson or Black Diamond File Distributor can meet your requirements for all file needs. • If you have a problem that calls for an entirely different kind of file, we'd like to work with you to solve it. Our research laboratory is available to you for this. • Your Nicholson or Black Diamond File Distributor is the man to call first if the subject is Files or Filing. Ask him now for a catalog, if you don't already have one. Write to us for "File Philosophy," a useful reference on files and filing.



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**Files and Rotary Burs • Hacksaw and Band Saw Blades  
Ground Flat Stock • Industrial Hammers**

**NICHOLSON**

**NICHOLSON  
U.S.A.**

**BLACK DIAMOND  
U.S.A.**

NICHOLSON FILE COMPANY, PROVIDENCE, RHODE ISLAND

# Employment Service

**Experience:** Ten years purchasing automotive interiors and exteriors, large and medium size manufacturers, outside expediting. Established and managed planning and purchasing departments.

**Education:** B.S. marketing.

**Will relocate.**

**Write:** Box 410

**Experience:** Three years assistant to P.A. in heavy steel construction. Three years P.A. light manufacturing, with piping and steel experience customs and exporting.

**Education:** Canadian high school. Business certificate—purchasing courses.

Interested in American firms moving to Canada.

**Write:** Box 411

**Experience:** Six years experience as buyer for multi-plant integrated metals producer. Thoroughly experienced in buying machined, stamped, and cast parts, packaging, tools, mill supplies, construction materials, construction contracting. Successful in standardization, cost reduction, scheduled buying.

**Education:** B.S. mechanical and civil engineering.

**Will relocate.**

**Write:** Box 412

**Experience:** Eleven years purchasing experience in the following fields; printing, electrical, pipe and fittings, electronics, office equipment and supplies, building and maintenance equipment. Also materials for packaging photographic, laboratory, art, engineering and medical depts.

**Education:** Three years college, now attending night college.

**Will relocate.**

**Write:** Box 407

**Experience:** Worked as clerk, planning dept.—then as summer replacement for traffic manager, cashier, and production control manager. Later was statistical analyst.

**Education:** B.S. & M.S. Bus. Adm.

**Will relocate.**

**Write:** Box 406

**Experience:** Past eight years procurement officer of 2400 bed state mental hospital. Two years purchasing in wholesale general merchandise field. Extensive knowledge in stores management, inventory control, property accounting, budget preparation, and budget coordination.

**Education:** B.S. Degree. Bus. Management. Major, two years drafting. Courses in job relations.

**Will relocate.**

**Write:** Box 405

**Experience:** One year as a buyer for a utility company. Commodities were: lumber safety equipment, and pole line hardware. One year with a greeting card company on their training program.

**Education:** B.S. degree—major in mathematics, and minors in economics and physics.

**Will relocate.**

**Write:** Box 408

**Experience:** Ten years diversified industrial buying experience in San Francisco area. Past 5 years with national food processing firm. Strong on MRO items. Experience in warehousing traffic & quality control work.

**Education:** B.S. Bus. Adm.—management major—also various NAPA courses.

**Write:** Box 401

**Experience:** Fifteen years widely diversified background in all phases of purchasing as purchasing agent for large industrial manufacturer. Familiar with subcontracting policies, raw materials (castings, forging, mill products), value analysis and cost reduction programs, broad administrative experience including reorganization and centralization.

**Education:** B.S. in Bus. Adm.—major in management and marketing—NAPA and special courses.

**Will relocate.**

**Write:** Box 409

**Experience:** Seven years varied and general purchasing experience as an assistant to the purchasing agent. Purchased mill tools and supplies; office machines, furniture, equipment, and supplies; electric motors and switchgear; oils and lubricants; safety equipment; merchandise for resale. Initiated purchasing procedures and systems.

**Education:** B. S. degree in management and marketing.

**Will relocate—in middle west.**

**Write:** Box 403

**Experience:** Seven years: expeditor, buyer, asst. Pur. agt. versed in systems & procedures, office management, inventory control; contracts, T&M, fixed fee, cost-plus procurement; ferrous & non-ferrous metals, chemicals, fabrication and castings, heavy equipment, and construction. Prior—const. supt. roads, railroads, housing developments.

**Education:** B.A. Bus. Adm., Economics.

**Will relocate.**

**Write:** Box 402

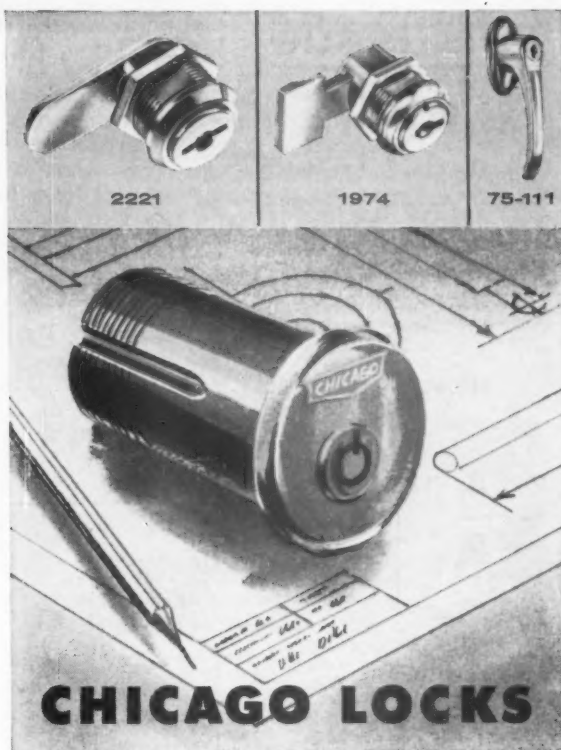
**Experience:** Presently scientific equipment buyer for large research institution (3 yrs.), previously responsible for electronic and photographic areas. Retail and wholesale buying experience part-time during college as well as full-time bookstore shipping and receiving supervisor. Opening must offer potential.

**Education:** B.S. Marketing 1953 with concentration of all available purchasing courses.

**Will relocate—Midwest preferred.**

**Write:** Box 404

**Listings in this department are offered without charge.** Both purchasing department personnel interested in changing jobs and employers in search of replacements or additions to their departments may take advantage of this service. When writing, specify whether you want the applicant's form or the employer's form. Address all correspondence—whether for forms, or in answer to an employment advertisement, to: Box No., Employment Service Department, PURCHASING Magazine, 205 East 42nd Street, New York 17, New York.

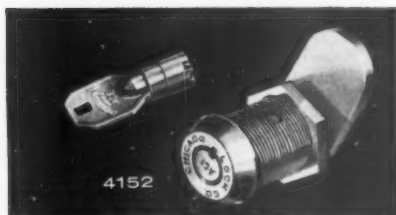


## Maximum Security at a Price You Can Afford

Every model in Chicago Lock's extensive line offers sure protection at reasonable cost. Every model is a marvel of precision engineering, compact design and rugged reliability.

They're handsomely styled, too and they operate smoothly under virtually all conditions. No wonder more and more design engineers specify Chicago Locks for an amazing variety of applications.

If your next project calls for a lock, investigate the Chicago line. You'll find a model that's perfect for your purpose and priced to keep costs down.



Chicago Lock's famous ACE line features the exclusive ROUND keyway for maximum security.

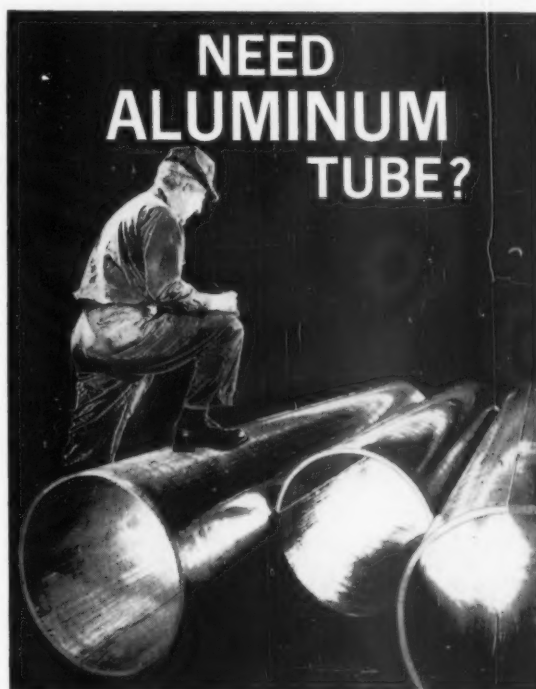
Write today for your catalog showing, in detail, the entire Chicago Lock line.

**CHICAGO LOCK CO.**

2052 North Racine Avenue • Chicago 14, Illinois

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JUNE 22, 1959



## NEED ALUMINUM TUBE?

Need formed and welded aluminum tube? Alcoa's Jobbing Division can form and weld aluminum tube in a wide range of wall thicknesses, diameters and lengths to meet your requirements. If corrosion resistance, light weight and strength are important in your tube requirements, formed and welded tube of Alcoa® Aluminum is your answer. Our complete engineering-fabricating facilities can give you high-volume production or custom-engineered jobs. And all of our welding facilities meet the requirements of aircraft, military and code specifications. These facilities can go to work for you.

**FREE TO MANUFACTURERS.** In addition to such "standard" items as formed and welded tube for industry, Alcoa's Jobbing Division has the world's finest aluminum fabricating facilities for subcontracting any aluminum components to your order for anything you make. Sixteen-page, free booklet describes how these facilities can save you tooling costs, lighten your production load and generally cost you less than if you shouldered the whole job yourself. For your copy, write or mail the coupon.



Your Guide to the Best in Aluminum Value

For Exciting Drama Watch "Alcoa Theatre," Alternate Mondays, NBC-TV, and "Alcoa Presents," Every Tuesday, ABC-TV

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1868-F Alcoa Building, Pittsburgh 19, Pa.

Please send my free copy of Alcoa Aluminum Fabricating Facilities.

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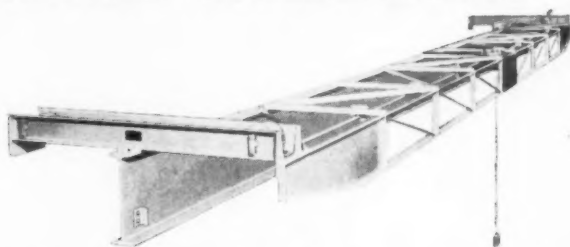
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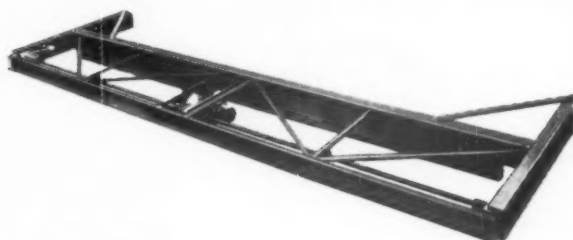
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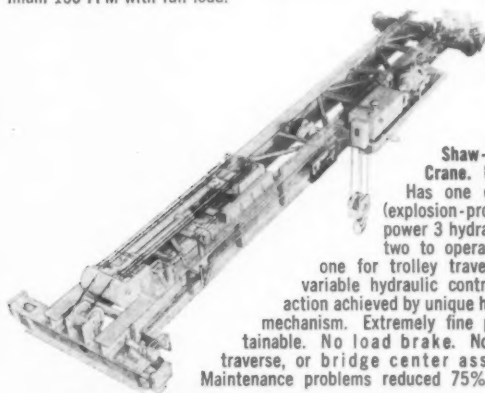
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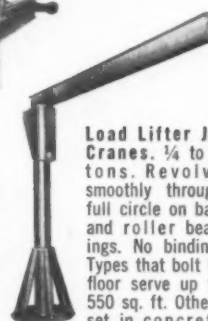
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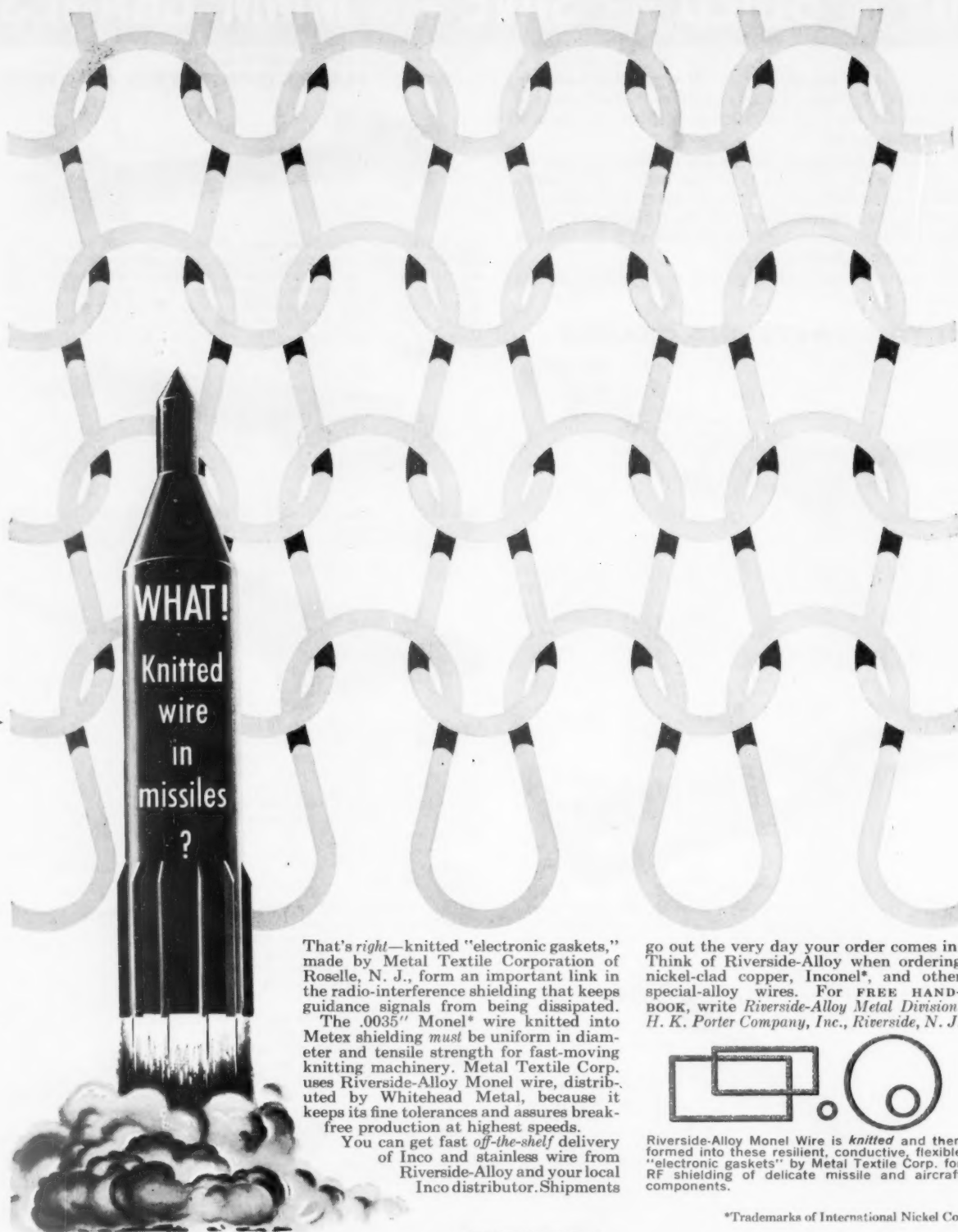
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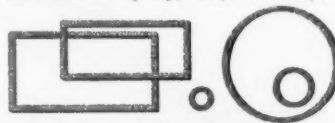
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